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DAIRY FARM MANAGEMENT BUSINESS SUMMARY NEW YORK 1977

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INTRODUCTION

Farm business management projects are a basic part of the management extension program in New York State. The College and the County Extension staffs cooperate in sponsoring these projects. In 1977, about 700 dairy farmers participated in these management projects. Each dairyman submitted farm business record information to the College for summary and analysis. These records provide the basis for extension educational programs and also data for applied research studies.

The Extension Agents organized the local groups of cooperators and collected the records. Regional summary reports were prepared by the college staff for use by the agents in winter meetings with farmers. Each cooperator received a summary and analysis of his business, and a regional report for use in studying his operation. These extension activities aim to help the operators of dairy farms develop their managerial skills and solve their business management problems.

The records from all regions of the State have been combined for use in an applied research study of the effects of price and technological changes on dairy farm incomes. This research provides current farm business information for use by dairymen, Extension Agents, teachers, agribusinessmen, policy makers, and others concerned with the New York dairy industry.

A total of 570 farm business records have been included in the general dairy summary for 1977. These 570 farms do NOT represent the "average" for all dairy farms in the State. Participation was on a voluntary basis so not all areas or types of operations were represented (see page 2). The 570 farms do represent a good cross-section of better than average commercial operators in the State.

1977 Regional Summary Publications

Region	Publication	Author(s)
Cortland County	A.E. Ext. 78-2	G. J. Conneman
Eastern Plateau Region	A.E. Ext. 78-3	S. F. Smith, W. A. Knoblauch
Southeastern New York	A.E. Ext. 78-5	S. F. Smith, G. J. Skoda
Northern Hudson Region	A.E. Ext. 78-6	S. F. Smith
Columbia & Dutchess Counties	A.E. Ext. 78-7	S. F. Smith
Oneida-Mohawk Region	A.E. Ext. 78-8	S. F. Smith
Western Plateau Region	A.E. Ext. 78-9	G. L. Casler
Northern New York	A.E. Ext. 78-10	C. A. Bratton
Western Central Plain	A.E. Ext. 78-11	W. A. Knoblauch
Central New York	A.E. Ext. 78-12	W. A. Knoblauch
Central Plain Region	A.E. Ext. 78-13	R. A. Milligan, L. N. Davis
Chenango County Limited Resource	A.E. Ext. 78-18	S. F. Smith

Acknowledgements

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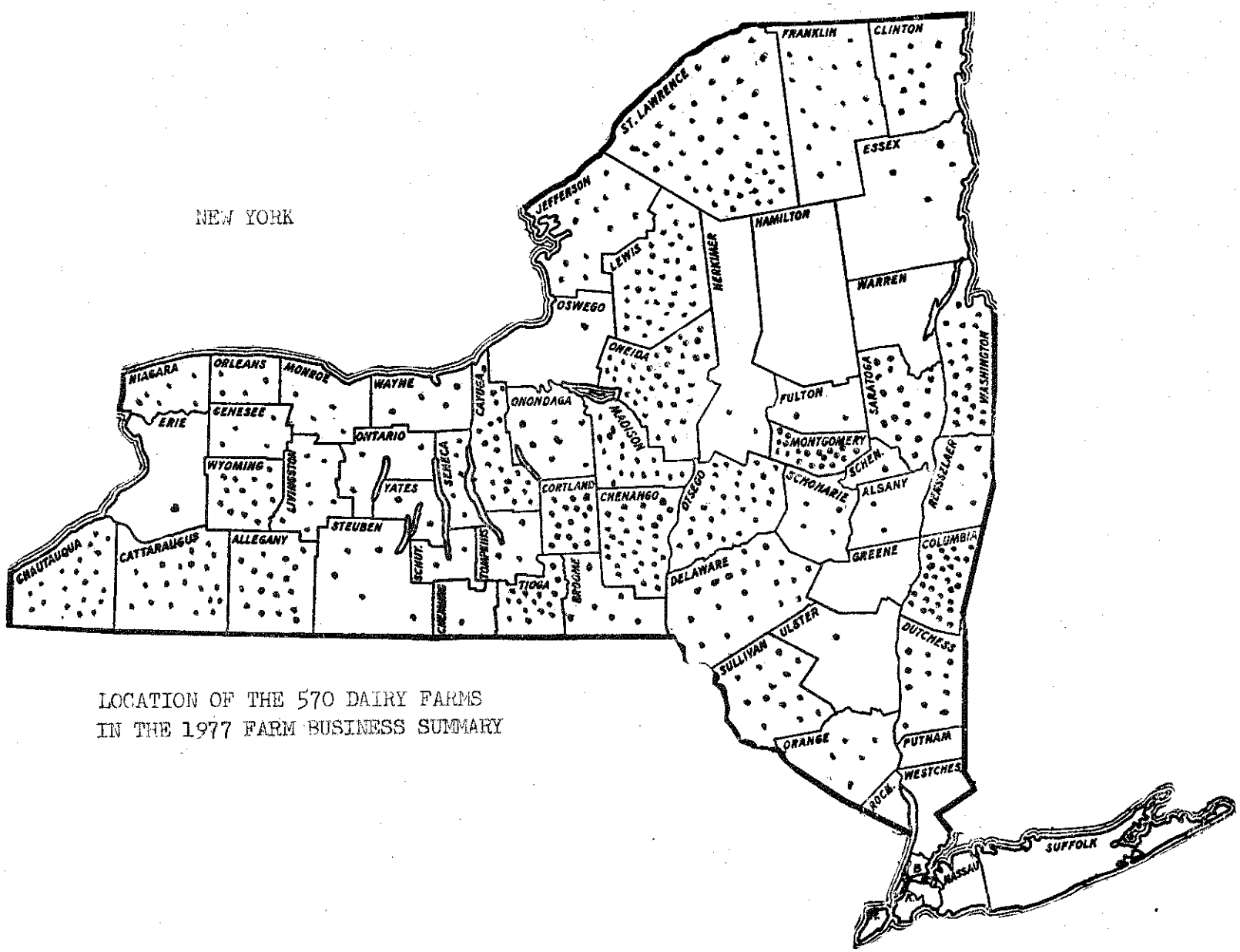
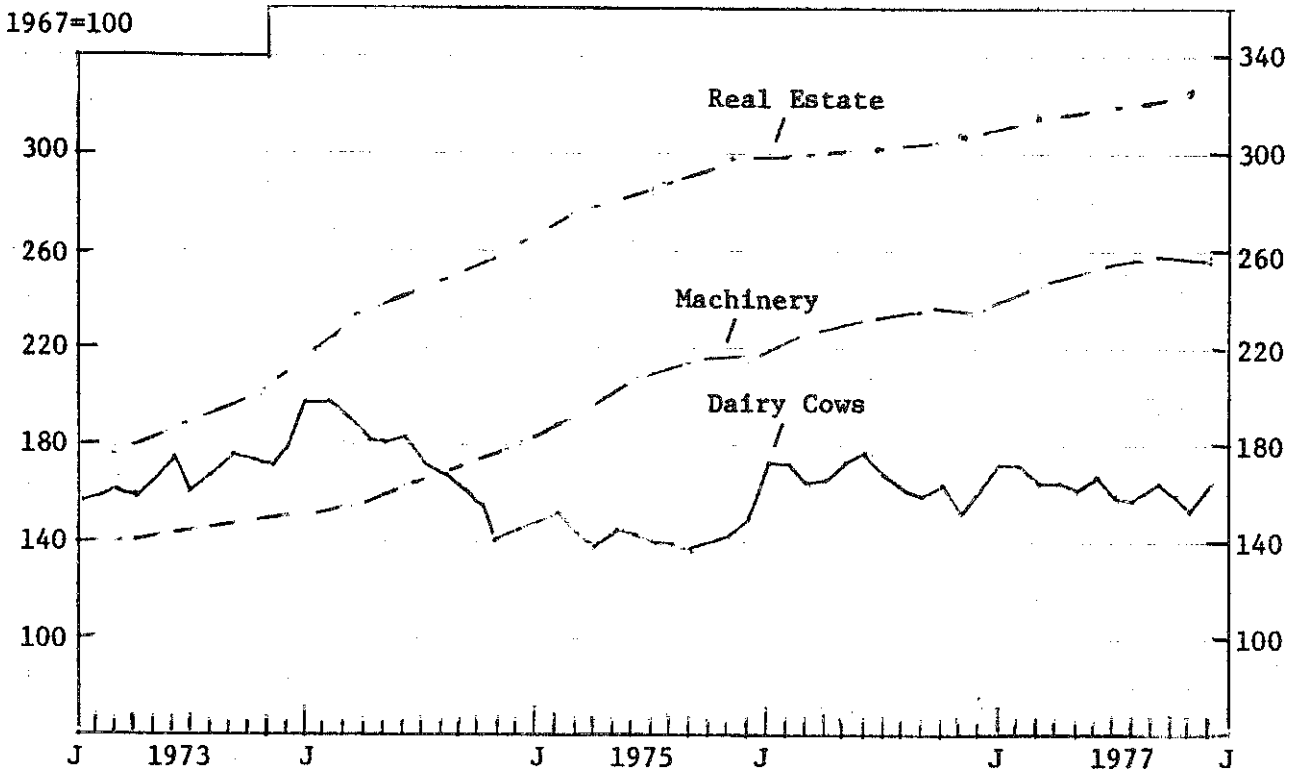
NEW YORK



LOCATION OF THE 570 DAIRY FARMS
IN THE 1977 FARM BUSINESS SUMMARY

Prices

VALUE OF N.Y. FARM REAL ESTATE, DAIRY COWS & MACHINERY
1973-77



SOURCE: USDA - Agricultural Prices
Farm Real Estate Market Developments

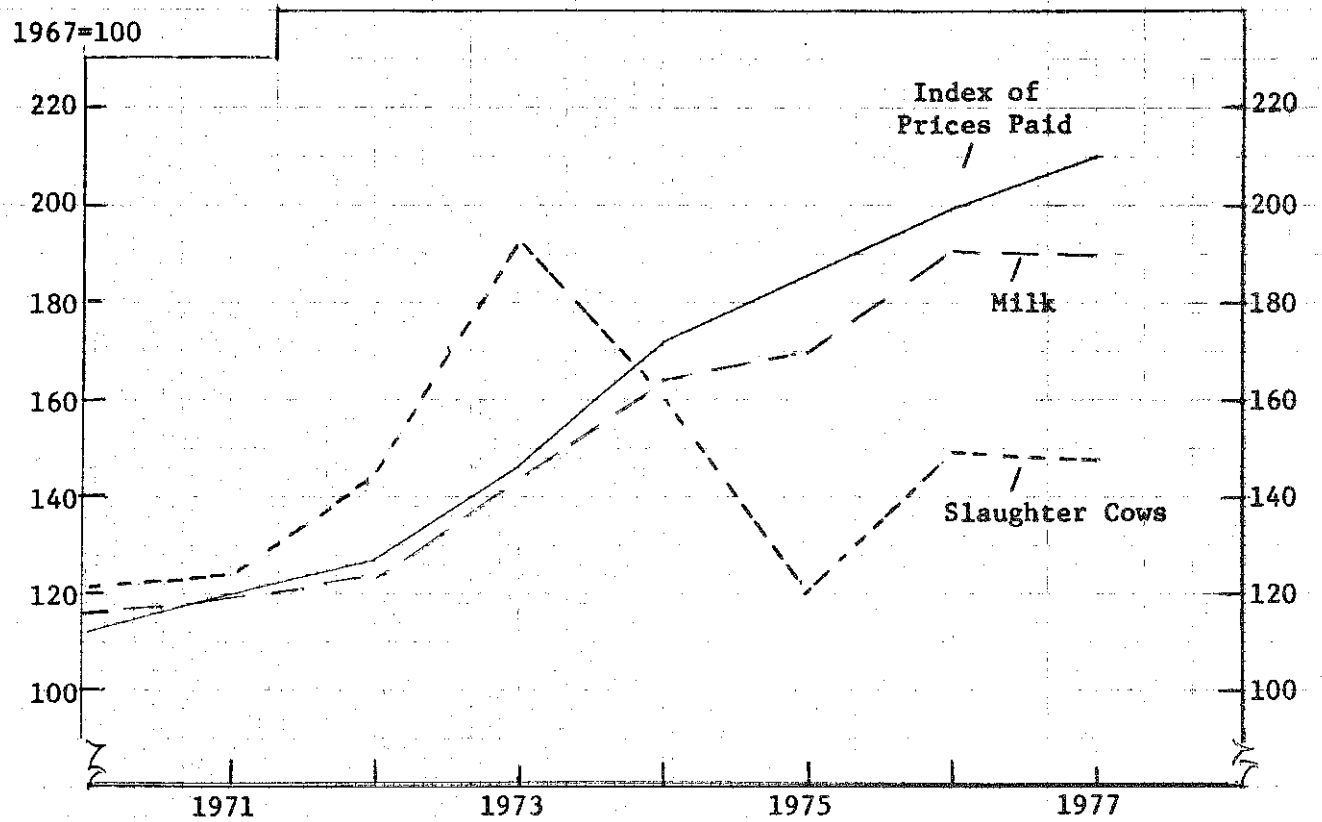
Price changes affect the inventory values on New York dairy farms. Real estate and machinery prices have risen steadily during the past five years, but the rate of rise was slower in 1976 and 1977. Dairy cow prices peaked in early 1974, dropped sharply during the year, then have risen gradually since. From 1967 to 1977, real estate values more than tripled, machinery prices increased two and a half times, while dairy cows increased 60%.

Table 1. REPORTED VALUES OF DAIRY FARM INVENTORY ITEMS, 1973-1977

	N.Y. Dairy Cows		Machinery	N.Y. Farm Real Estate	
Year*	Value/Head	1967=100	1967=100	Value/Acre	1967=100
1973	(Dec.) $550	177	(Dec.) 150	(Nov.) $442	199
1974	(Dec.) 435	140	(Dec.) 185	(Nov.) 564	254
1975	(Dec.) 450	145	(Dec.) 222	(Nov.) 653	294
1976	(Dec.) 485	156	(Dec.) 233	(Nov.) 677	304
1977	(Dec.) 495	160	(Dec.) 253	(Nov.) 711	320
Percent Change:					
'73 to '74	-21%		+23%	+28%	
'74 to '75	+ 4%		+20%	+16%	
'75 to '76	+ 8%		+ 5%	+ 3%	
'76 to '77	+ 2%		+ 9%	+ 5%	

* Latest figure reported for year, i.e., November for real estate.

PRICES RECEIVED AND PAID BY N.Y. DAIRY FARMERS, 1970-1977



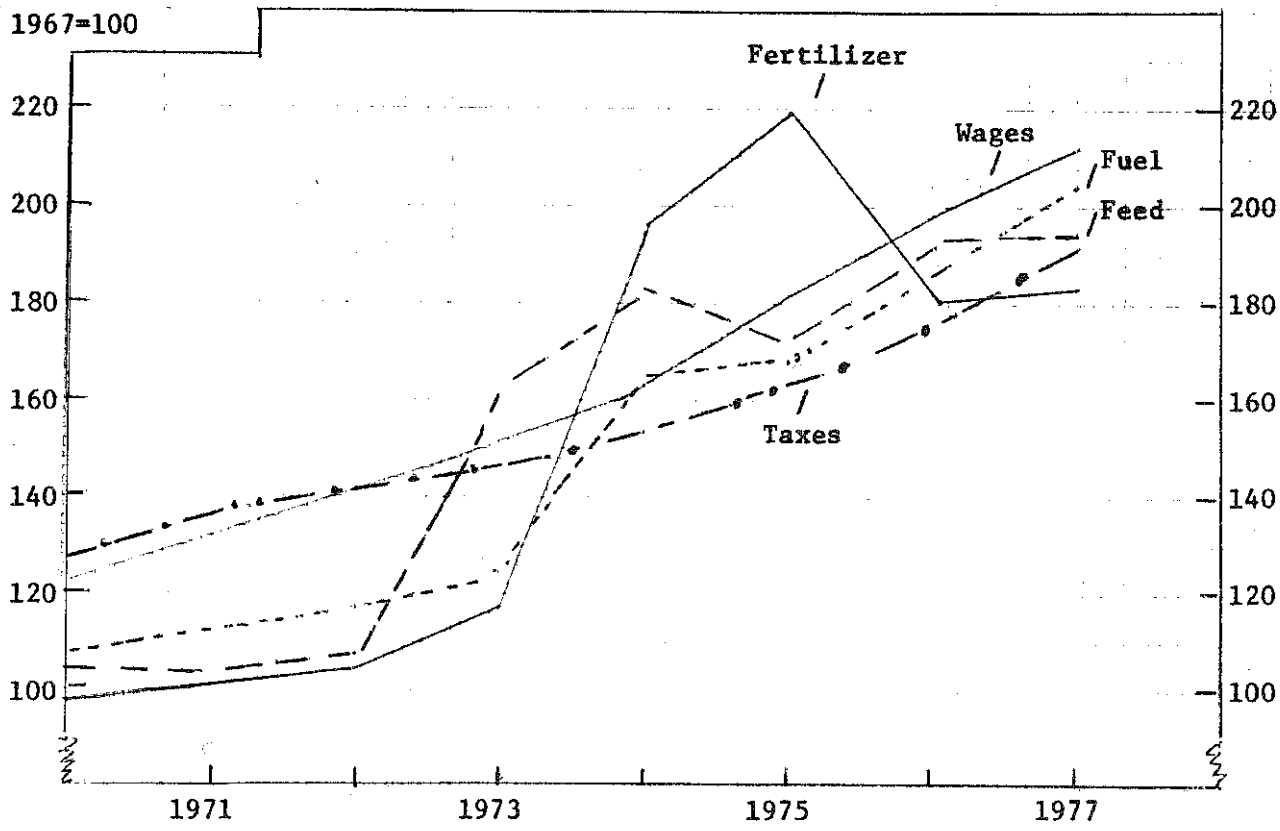
SOURCE: USDA - Agricultural Prices

The relationship of prices received to prices paid determines the general level of farm incomes. The graph above shows the trend in prices since 1970 for milk, cull cows, and the index of prices paid by New York dairy farmers. Since 1971, milk prices have lagged behind all prices paid. Milk and slaughter cow prices dropped slightly in 1977, while prices paid continued to rise. The price situation in 1977 was less favorable than in 1976.

Table 2. PRICES RECEIVED AND PAID BY NEW YORK DAIRY FARMERS, 1967-1977

Year	Milk 3.5% B.F.	Slaughter Cows	Prices Paid by New York Dairy Farmers	Monthly Farm Price/100 Lbs. of Milk, 1977	
	(cwt.)	(cwt.)	(1967=100)		
1967	$5.07	$17.10	100	January	$ 9.42
1968	5.43	17.60	103	February	9.38
1969	5.66	19.30	107	March	9.13
1970	5.89	20.70	112	April	9.02
1971	6.02	21.20	120	May	8.98
1972	6.25	24.48	126	June	9.06
1973	7.30	32.80	146	July	9.63
1974	8.24	27.40	172	August	10.09
1975	8.64	20.60	186	September	10.34
1976	9.71	25.57	200	October	10.35
1977	9.61	25.09	210	November	10.12
				December	9.83

PRICES PAID BY FARMERS FOR SELECTED ITEMS, 1970-1977



Since 1972, all prices paid by New York dairy farmers have risen but some more than others. Fertilizer and motor fuel prices jumped sharply in 1974 and 1975, then fertilizer dropped in 1976. Feed and fertilizer held relatively steady in 1977, while wages, fuel, and taxes continued to rise. In general, these price items about doubled from 1967 to 1977.

Table 3. PRICES PAID BY FARMERS FOR SELECTED ITEMS, 1972-1977

Year	Index 1967=100				
	Feed	Fertilizer	Fuel	Wages	Taxes
1972	112	94	108	140	142
1973	157	102	116	150	146
1974	185	167	159	160	154
1975	177	217	177	180	166
1976	192	185	187	199	176
1977	194	182	203	212	186
% increase:					
'72 to '77 (av.)	15%	19%	18%	10%	6%
'75 to '76	8%	15%	6%	11%	6%
'76 to '77	1%	-2%	9%	7%	6%

SOURCE: USDA - Agricultural Prices

SUMMARY OF THE FARM BUSINESS

Resources

A look at the resources used is the first step in the analysis of a farm business. The resources used and characteristics of the 570 farm businesses included in this study are reported on this page.

Table 4. BUSINESS CHARACTERISTICS AND RESOURCES USED
570 New York Dairy Farms, 1977

Type of Business	No.	%	Business Records	No.	%	Dairy Records	No.	%
Individual	458	80	Account Book	254	45	D.H.I.A.	356	63
Partnership	100	18	CAMIS	125	22	Owner Sampler	91	16
Corporation	12	2	Agrifax	93	16	Other	31	5
			Agway	29	5	None	92	16
			Farm Bureau	14	2			
			Other	55	10			

Barn Type	No.	%	Milking System	No.	%	Milking System	No.	%
Stanchion	372	65	Bucket & carry	16	3	Herringbone	145	25
Free stall	191	34	Dumping station	179	32	Other parlor	29	5
Other	7	1	Pipeline	201	35			

Labor Force	My Farm	Average
Operator	_____	15 mo.
Family paid	_____	3 mo.
Family unpaid	_____	3 mo.
Hired	_____	9 mo.
Total	_____	30 mo.
Age of operator(s)	_____	41 yrs.
Estimated value operator's labor and management	$_____	$11,738

Land Used	My Farm	Farms	Acres
Total acres owned	_____	570	307
Total acres rented	_____	451	97
Total crop acres	_____	570	219
Crop acres rented	_____	436	73

Number of Cows	My Farm	Average
Beginning of year	_____	71
End of year	_____	72
Average for year	_____	71

436 or 76% of the 570 operators rented some cropland. The average acres rented by the 436 farmers was 73 or an average of 56 for the 570 farms. Thus of the 219 total crop acres, 26% were rented.

The average total farm inventory increased from $265,800 to $284,200 or 7% during 1977. The increase reflects both growth in the businesses and inflation.

Table 5. CAPITAL INVESTMENT - FARM INVENTORY VALUES
570 New York Dairy Farms, 1977

	My Farm		Average 570 Farms		Percent
	1/1/77	1/1/78	1/1/77	1/1/78	Increase
Livestock	$_____	$_____	$ 53,164	$ 56,273	6%
Feed & supplies	_____	_____	20,915	20,958	--
Machinery & equipt.	_____	_____	49,916	55,230	11
Land & buildings	_____	_____	141,797	151,749	7
Total	$_____	$_____	$265,792	$284,210	7%

Machinery and Real Estate Calculations

Capital expenditures for machinery and buildings usually occur in large amounts but then are used over a number of years. Calculation of the machinery depreciation to be charged to the 1977 business is shown below. Building depreciation is the amount used for tax purposes. Both are included as farm expenses on page 10.

Table 6. MACHINERY DEPRECIATION
570 New York Dairy Farms, 1977

Item	My Farm	Average 570 Farms
Beginning Inventory	$_____	$49,916
Purchases	_____	11,324
Total (1)	$_____	$61,240
End Inventory	$_____	$55,230
Sales	_____	227
Total (2)	_____	55,457
DEPRECIATION (1 minus 2)	$_____	$ 5,783
Percent Depreciation	_____%	9%

Lost capital represents the difference between the cost of real estate purchased during the year and the amount these improvements added to the sale value of the real estate. It is not included in farm expenses since building depreciation is based on the full cost of new buildings and will account for the lost capital over the life of the building.

Real estate appreciation was estimated by each farm operator. This appreciation includes the increase in market value and the building depreciation for the beginning package of real estate. Appreciation averaged about 3 percent of the beginning real estate inventory for the year 1977. This is at a lower rate than in recent years.

Table 7. REAL ESTATE CALCULATIONS
570 New York Dairy Farms, 1977

Item	My Farm	Average 570 Farms
Beginning Inventory	$_____	$141,797
Plus Cost of Purchases	$_____	$10,083
Less Lost Capital	_____	-1,303
Value Added	_____	+8,780
Less Bldg. Depreciation	$_____	$-2,791
Less items sold	_____	-265
Value Deducted	_____	-3,056
Plus Appreciation	_____	+4,228
End of Year Inventory	$_____	$151,749

Receipts

Total farm receipts indicate the value of the farm's production for the year. This includes the cash received for products sold plus the increase in value of livestock and feed and supplies inventories. The receipts on these 570 farms averaged about $300 per day or $4 per cow per day.

Table 8. FARM RECEIPTS
570 New York Dairy Farms, 1977

Item	My Farm	Average 570 Farms Per Farm	Per Cow	Percent
Milk sales	$_____	$ 94,165	$1,326	90
Crop sales	_____	801	11	1
Dairy cattle sold	_____	6,000	85	6
Other livestock sales	_____	1,393	20	2
Gas tax refunds	_____	149	2	--
Government payments	_____	393	6	--
Work off farm	_____	82	1	--
Custom machine work	_____	132	2	--
Miscellaneous	_____	1,128	15	1
Total Cash Receipts	$_____	$104,243	$1,468	100
Increase in livestock inventories	_____	3,109	44	
Increase in feed and supplies	_____	43	1	
TOTAL FARM RECEIPTS	$_____	$107,395	$1,513	

Cow prices rose some during the year, cattle numbers increased, and the quality of the herds continued to improve on many farms, so the 570 farms had a net increase in livestock inventories of $3,109. The number of cows increased from 71 in the beginning to 72 at the end of year, and the average livestock inventory value per cow (including heifers) was $749 at the beginning of the year and $782 at the end, or an increase of $33 per cow.

The average price received for milk sold in 1977 by the 570 farms was $9.76. The state average was $9.61 shown on page 4. Milk sales per cow averaged $1,326 per cow for the 570 farms, while the top 10 percent of the farms based on labor income averaged $1,419 per cow (table 9). Total cash receipts per man averaged $41,700 for all farms and $54,300 or 30% more for the top 10% of the farms.

Table 9. INCOME ANALYSIS

Item	My Farm	Average 570 Farms	Top 10%
Average price per cwt. milk sold	$_____	$9.76	$9.86
Milk sales per cow	$_____	$1,326	$1,419
Total cash receipts per man	$_____	$41,697	$54,334

The average price per hundredweight of milk sold by the 570 farms in 1977 was $9.76. The average price is calculated by dividing the gross milk receipts for the year by the total pounds of milk sold. The variation in average price received for different farms is shown below.

Variation in Average Milk Price Received

Average Price/Cwt. Received for Milk	Farms	
	Number	Percent
Below - $ 9.00	6	1
$ 9.00 - 9.24	19	3
9.25 - 9.49	122	21
9.50 - 9.74	223	39
9.75 - 9.99	91	16
10.00 - 10.24	33	6
10.25 - 10.49	32	6
10.50 & over	44	8
Total	570	100

Dairymen often say there is nothing they can do about the price received for milk. This may be true as it pertains to the price at a particular time, but the variation shown here does indicate that the average annual prices received for milk by farmers do vary. Management practices account for some of the differences. Seasonality of production and butterfat test are two management items that affect the average price for the year.

Total farm receipts are sometimes used as a measure of size of business. The Census of Agriculture uses this measure in classifying farms. The distribution of total farm receipts of the 570 farms in 1977 is shown below.

Distribution of Farms by Total Farm Receipts

Total Farm Receipts	Farms	
	Number	Percent
Under - $ 40,000	38	7
$ 40,000 - 49,999	42	7
50,000 - 59,999	34	6
60,000 - 69,999	78	14
70,000 - 79,999	57	10
80,000 - 89,999	29	5
90,000 - 99,999	55	10
100,000 - 119,999	65	11
120,000 - 149,999	62	11
150,000 - 199,999	48	8
200,000 or over	62	11
Total	570	100

Only 7 percent of the 570 farms had total farm receipts under $40,000, while 11 percent had receipts of $200,000 or more.

Expenses

The total cash farm expenses for the 570 farms averaged $220 per day or $3 per cow per day. Total expenses averaged $285 per day. The average expenses per farm and per cow for each item are shown below.

Table 10. FARM EXPENSES
570 New York Dairy Farms, 1977

Item	My Farm	Average 570 Farms Per Farm	Average 570 Farms Per Cow	Percent
Labor				
Hired labor	$_____	$ 8,066	$ 114	10
Feed				
Dairy concentrate	_____	26,741	377	33
Other feed	_____	1,181	17	2
Machinery				
Machine hire	_____	750	11	1
Machinery repairs	_____	4,740	67	6
Auto expense (farm share)	_____	327	5	--
Gas and oil	_____	2,987	42	4
Livestock				
Purchased animals	_____	2,595	36	3
Breeding fees	_____	1,193	17	1
Veterinary and medicine	_____	1,684	24	2
Milk marketing	_____	2,332	33	3
Other livestock expense	_____	3,299	46	4
Crops				
Lime and fertilizer	_____	4,766	67	6
Seeds and plants	_____	1,524	21	2
Spray & other crop expense	_____	1,282	18	2
Real Estate				
Land, building, fence repair	_____	1,527	21	2
Taxes	_____	2,577	36	3
Insurance	_____	1,702	24	2
Rent	_____	1,263	18	2
Other				
Telephone (farm share)	_____	376	5	--
Electricity (farm share)	_____	1,684	24	2
Interest paid	_____	6,947	98	9
Miscellaneous	_____	1,103	16	1
TOTAL CASH EXPENSES	$_____	$ 80,646	$1,137	100
Machinery depreciation	_____	5,783	81	
Building depreciation	_____	2,791	39	
Unpaid labor	_____	1,200	17	
Interest on equity capital @ 7%	_____	13,237	186	
Decrease in livestock inventory	_____	--	--	
Decrease in feed & supply inventory	_____	--	--	
TOTAL FARM EXPENSES	$_____	$103,657	$1,460	

The cash expense classifications used on page 10 are taken from the "Cornell Farm Account Book." Lists of the items included in each category are presented on the inside back cover of that account book.

Interest paid on farm indebtedness has been included as a cash expense in these summaries since 1973. Although debt payments usually include both interest and principal, only the interest portion is included here.

Machinery and real estate depreciation - expenditures for machinery and buildings are usually made in large amounts. To include all the expenses in the year of purchase would inflate the farm expenses. Machinery depreciation was calculated on page 7, and the farmers reported their building depreciation as that used for their income tax returns.

Unpaid family labor refers to work done by members of the family who are not paid cash wages. The operator estimates the number of months of unpaid labor. This is charged to the business at $400 per month.

Interest on equity capital at 7% has been included as a noncash expense item. This represents what the operator might have earned on his equity capital had he not had it invested in the farm business. This is often called an "opportunity cost." The end-of-year farm net worth (see page 15) is used as the equity capital for computing this interest charge.

Decrease in livestock and feed inventories is the amount that the beginning inventory for each of these two items exceeds the end inventory. Since this indicates a "using up" of inventory items, it is considered as a farm expense for the year. For the 570 farms, the net inventory change was an increase for feed and supplies and livestock. Space is provided for individual farms that might have a decrease.

Farm expenses can be classified on the basis of fixed, variable, and capital items as shown below:

Overhead Expenses (Fixed)	
Land & building repairs	$ 1,527
Property taxes	2,577
Insurance	1,702
Rent	1,263
Electricity	1,684
Telephone	376
Total Fixed Overhead	$ 9,129

Capital Expenses	
Interest on equity capital	$13,237
Interest paid	6,947
Machinery depreciation	5,783
Real estate depreciation	2,791
Total Capital Expenses	$28,758

Operating Expenses (Variable)	
Labor	$ 8,066
Feed	27,922
Machinery repairs	4,740
Gas and oil	2,987
Machine hire	750
Auto	327
Livestock purchased	2,595
Livestock expenses	8,508
Fertilizer and lime	4,766
Other crop expenses	2,806
Unpaid labor	1,200
Miscellaneous	1,103
Total Variable	$65,770

On these farms, the variable expenses accounted for 63%, the fixed 9%, and the capital expenses 28% of the total farm expenses.

Financial Summary of Year's Business

Researchers have developed a number of ways to measure the financial returns from a farm business. Several common measures are reported here. The measure selected for use at any one time will depend on the purpose. For example, an investor might be interested in return on equity capital, while the farm operator may be interested in the return for his labor and management.

Table 11. NET CASH FARM INCOME
570 New York Dairy Farms, 1977

Item	My Farm	Average 570 Farms Per Farm	Average 570 Farms Per Cow
Cash Farm Receipts	$_____	$104,243	$1,468
Cash Farm Expenses	_____	80,646	1,137
NET CASH FARM INCOME	$_____	$ 23,597	$ 331

Net cash farm income reflects the cash available from the year's operation of the business. Family living has first claim on cash income followed by fixed payments on debts. A family may have additional cash available if they have a nonfarm income. Cash flow is not a good measure of the profitableness of the business, but it is useful when planning debt repayment programs or in planning family budgets.

Table 12. LABOR AND MANAGEMENT INCOME
570 New York Dairy Farms, 1977

Item	My Farm	Average 570 Farms Per Farm	Average 570 Farms Per Cow
Total Farm Receipts	$_____	$107,395	$1,513
Total Farm Expenses	_____	103,657	1,460
LABOR & MANAGEMENT INCOME	$_____	$ 3,738	$ 53
Number of Operators	_____	(699) 1.23	
LABOR & MGT. INCOME/OPERATOR	$_____	$ 3,049	

Labor and management income is the return to the operator for his efforts in operating the business. A 7% charge for the use of the operator's equity capital in the business has been included as a farm expense. This interest charge reflects what the operator could have earned with this capital had it been invested elsewhere, such as in bank certificates. If there is more than one operator on a farm, the total labor and management income for the farm is divided by the number of operators to get labor and management income per operator. Labor and management income is the measure used most often for comparing farm businesses.

The average labor and management income per operator for these 570 dairy farms was $3,049. In addition, the operators had the use of a house and perquisites, such as milk and meat which should be included when considering the operator's net earnings. There was a wide range in the labor and management incomes as shown below. Thirty-seven percent or more than one-third of the farms had minus labor incomes for 1977, while three percent had labor incomes of $25,000 or more.

Distribution of Labor and Management Incomes Per Operator

Labor and Management Income Per Operator	Farms	
	Number	Percent
$-10,000 and below	71	13
-9,999 - $-5,001	60	11
-5,000 - -1	76	13
0 - 4,999	120	21
5,000 - 9,999	114	20
10,000 - 14,999	58	10
15,000 - 19,999	34	6
20,000 - 24,999	19	3
25,000 or more	18	3

Labor, management, and ownership income per operator reflects the combined return to the farmer for his triple role of worker-manager, financier, and owner. This measure includes appreciation on real estate, and return on equity capital, and is the amount available for the operator's living and his gain in business net worth. The average labor, management, and ownership income per operator was $17,294, or nearly six times the labor and management income which explains in part how some farmers accumulate sizeable net worths with only modest labor incomes.

Table 13. LABOR, MANAGEMENT, AND OWNERSHIP INCOME
570 New York Dairy Farms, 1977

Item	My Farm	Average 570 Farms	Percent
Labor and management income/farm (p. 12)	$_____	$ 3,738	18
Real estate appreciation (p. 7)	_____	4,228	20
Interest on equity capital @ 7% (p. 10)	_____	13,237	62
Total Per Farm	$_____	$21,203	100
Number of operators	_____	(699) 1.23	
LABOR, MANAGEMENT, AND OWNERSHIP INCOME PER OPERATOR	$_____	$17,294	

Management income is another measure used in studying farm businesses. to get management income, the value of operator's labor is subtracted from labor and management income. In this study, operator's labor was valued at $7,200. This gives a management income per operator of $-4,151 ($3,049 minus $7,200). If appreciation were included, the management income per operator would be $-714.

Return on Equity Capital can be computed with or without real estate appreciation. To calculate return on equity capital (including real estate appreciation), the estimated value of operator's labor and management is deducted from labor, management, and ownership income. This return to equity capital is divided by the farm net worth to get the rate of return on equity capital. To compute return on equity capital, excluding real estate appreciation, real estate appreciation must be deducted from ownership income.

Table 14. RETURN ON EQUITY CAPITAL
570 New York Dairy Farms, 1977

Item	My Farm	Average 570 Farms
	Including Real Estate Appreciation	
Labor, Management & Ownership Income (p. 13)	$_____	$21,203
Value of Operator's Labor & Management (p. 6)	_____	(1.23) 14,438
RETURN ON EQUITY CAPITAL	$_____	$ 6,765
Amount of Equity Capital	$_____	$189,104
RATE OF RETURN ON EQUITY CAPITAL	_____ %	3.6%
	Excluding Real Estate Appreciation	
Return on Equity Capital (from above)	$_____	$6,765
Real Estate Appreciation	_____	4,228
RETURN ON EQUITY CAPITAL	$_____	$2,573
Amount of Equity Capital	$_____	$189,104
RATE OF RETURN ON EQUITY CAPITAL*	_____ %	1.3%

* The rate of return on the end-of-year capital was 5.6%.

The operators were asked to estimate the value of their labor and management on the basis of what they might be able to earn if they were to hire out in a similar position. The average estimate for the 699 operators was $11,738. This is in line with the value if determined by the value of the labor plus a management charge based on 5% of the cash receipts.

Returns Per Unit of Input

Income from a business can also be calculated in relation to various input units. For example, since these are family-type farms, the labor and management return can be figured on a per man basis. Returns can also be figured on a per cow basis. These are shown below.

Returns to All Labor	
Labor & mgt. income per farm	$ 3,738
Value hired labor	8,066
Value unpaid labor	1,200
Total Returns to Labor	$13,004
Average man equivalent	2.5
Returns per man equivalent	$5,202
Returns per hour (3,000 hrs./yr.)	$1.73

Returns Per Cow	
Net cash farm income/cow	$331
Labor & mgt. income/cow	$53
Labor, management and ownership income/cow	$299

Farm Family Financial Situation

Table 15. FARM FAMILY FINANCIAL SITUATION
570 New York Dairy Farms, January 1, 1978

Item	My Farm	Average 570 Farms Amount	Percent
Assets			
Livestock	$_____	$ 56,274	18
Feed and supplies	_____	20,959	6
Machinery and equipment	_____	55,231	18
Land and buildings	_____	151,749	49
Co-op investment	_____	3,624	1
Accounts receivable	_____	6,614	2
Cash and checking accounts	_____	1,797	1
Total Farm Assets	$_____	$296,248	95
Savings accounts	$_____	$ 3,420	1
Cash value life insurance	_____	3,113	1
Stocks and bonds	_____	2,264	1
Nonfarm real estate	_____	3,304	1
Auto (personal share)	_____	906	--
All other	_____	1,899	1
Total Nonfarm Assets	_____	14,906	100
TOTAL ASSETS	$_____	$311,154	
Liabilities			
Real estate mortgage	$_____	$ 59,345	55
Liens on cattle & equipment	_____	36,588	34
Installment contracts	_____	2,785	3
Notes and other farm debt	_____	8,426	8
Total Farm Liabilities	$_____	$107,144	100
Nonfarm Liabilities	_____	1,336	
TOTAL LIABILITIES	$_____	$108,480	
Farm Net Worth (equity capital)	$_____	$189,104	
Family Net Worth	$_____	$202,674	

The financial situation is an important part of the farm business summary. It has a direct effect on current cash outflow and future capital investment decisions. A farmer may have a good labor income but a high debt payment schedule may seriously restrict his management flexibility.

Total farm assets accounted for 95% of the total assets. Real estate mortgages were the largest liability and accounted for 55% of all debts. Installment contracts, notes, and other debt accounted for 11 percent of all liabilities. These are often problem debt areas. Equity capital for the 570 farms averaged $189,104, and the total family net worth exceeded $200,000.

Table 16. FINANCIAL MEASURES AND DEBT COMMITMENTS
570 New York Dairy Farms, January 1, 1978

Measure	My Farm	Average 570 Farms	Average Top 10% Farms
Percent equity	_____%	65%	71%
Farm debt per cow	$_____	$1,509	$1,179
Available for debt service & living	$_____	$30,540	$59,880
Scheduled annual debt payments	$_____	$18,033	$24,240
Scheduled debt payment per cow	$_____	$254	$216
Scheduled debt payment as % milk check	_____%	19%	15%

Equity capital, or farm net worth, is the difference between the total farm assets and the total farm liabilities. It represents the amount of farm capital provided by the operator.

Percent equity is the family net worth divided by the total assets. This indicates the general equity position of the family for credit purposes.

Farm debt per cow is total farm liabilities divided by number of cows. It indicates the relative debt load per production unit.

Available for debt service and living is the net cash farm income plus the interest paid. In planning debt repayments, subtract the expected family living expenses to determine the amount available for debts.

Scheduled annual debt payments represent the commitments outstanding as of January 1, 1978. When figured on a per cow or percent of milk check basis, the reasonableness of the debt commitment can be appraised.

As shown in table 17, there did not appear to be any definite relationship between herd size and percent equity or debt per cow.

Table 17. FINANCIAL SITUATION BY SIZE OF HERD
570 New York Dairy Farms, 1977

Herd Size (Cows)	Number of Farms	Number of Cows	Total Farm Assets	Farm Liabilities	Farm Equity Capital	Percent Equity	Debt Per Cow
Under 40	86	32	$139,000	$ 45,250	$ 93,790	70%	$1,410
40 - 54	157	46	196,800	76,500	120,300	63	1,660
55 - 69	120	61	257,700	93,600	164,100	65	1,540
70 - 84	73	75	344,100	120,000	224,100	67	1,600
85 - 99	40	91	363,800	132,700	231,100	65	1,440
100 - 114	21	104	402,400	181,800	220,600	56	1,700
115 - 129	19	120	469,000	168,900	300,100	65	1,400
130 - 149	17	139	550,500	179,700	370,800	69	1,300
150 & over	37	193	775,600	264,500	511,100	66	1,370

ANALYSIS OF THE FARM BUSINESS

A systematic analysis of the operation helps to determine strengths and weaknesses in the business. In this part, five business factors are examined: size of business, rates of production, labor efficiency, capital efficiency, and cost control. The 1977 averages of selected measures for these factors for the 570 farms, and the average for the 10% with the highest labor and management incomes per operator are reported along with general relationships of factors to labor income. Since the measures examined are interrelated, all factors should be studied before arriving at major conclusions.

Size of Business

Size has an effect on other factors such as labor efficiency, cost control, and capital efficiency. The prices received and paid are often affected by volume which is a function of size. Farm management studies show that in general larger farm businesses (when well managed) make larger labor incomes. Two basic reasons for this are that larger businesses make possible more efficient use of overhead inputs such as labor and machinery, and there are more units on which to make a profit.

Table 18. MEASURES OF SIZE OF BUSINESS
570 New York Dairy Farms, 1977

Measure	My Farm	Av. 570 Farms	Av. Top 10% Farms
Number of cows	_____	71	112
Number of heifers	_____	51	84
Man equivalent	_____	2.5	3.3
Total acres in crops	_____	219	306
Pounds of milk sold	_____	964,800	1,612,600
Total work units	_____	785	1,222
Total cash receipts	$_____	$104,243	$176,586
Total investment (end inventory)	$_____	$284,210	$413,290

Number of cows is the average number in the herd for the year. Where available, the D.H.I.A. annual average is used.

Total acres in crops includes all acres on which crops were harvested during the 1977 year. It does not include cropland pasture or uncropped land.

Man equivalent is the amount of labor available on the farm during the year in terms of full-time man years. Work of part-time employees and family members is converted to full-time man equivalent.

Total work units represents the number of productive man days that would be required under average conditions to care for the acreage of crops grown and the number of livestock handled. A man work unit is the average amount of productive work accomplished in ten hours.

Table 19. COWS PER FARM AND LABOR AND MANAGEMENT INCOME
570 New York Dairy Farms, 1977

Number of Cows	Number of Farms	Percent of Farms	Labor & Management Income Per Operator	Per Cow
Under 40	86	15%	$-1,022	$-33
40 - 54	157	27	2,338	56
55 - 69	120	21	2,933	59
70 - 84	73	13	5,467	97
85 - 99	40	7	3,454	53
100 - 114	21	4	321	4
115 - 129	19	3	11,764	155
130 - 149	17	3	5,186	48
150 - 179	22	4	6,196	48
180 - 199	5	1	-681	-8
200 & over	10	2	4,959	32

The relation of size of business to labor and management income was observed for size as measured by number of cows and by man equivalent. In general, the larger the businesses, the higher the labor incomes per operator. This relationship is consistent with that of earlier studies. A well-managed large farm will provide the operator a higher income than a well-managed small one, but a large farm poorly managed also can lose more.

Man equivalent is often used as a measure of size. It is of interest that 75% of the farms had man equivalents of less than 3.0 (table 20). Thirty-four percent of the farms had less than 2.0 men and only 8% had 4.0 or more.

In a year of relatively low labor and management incomes, the relationship of size and income is less clear. An example is the 34 farms with 4.5 and over man equivalents, and it was the one group that had a minus labor income in 1977.

Table 20. MAN EQUIVALENT PER FARM AND LABOR AND MANAGEMENT INCOME
570 New York Dairy Farms, 1977

Man Equivalent	Number of Farms	Percent of Farms	Number of Cows	Labor & Management Income Per Operator
1.0 - 1.4	73	13%	38	$ 590
1.5 - 1.9	118	21	47	3,200
2.0 - 2.4	154	27	59	2,860
2.5 - 2.9	78	14	72	3,020
3.0 - 3.4	67	12	89	1,340
3.5 - 3.9	31	5	103	3,650
4.0 - 4.4	15	2	138	12,700
4.5 & over	34	6	187	-1,050

Rates of Production

Production per animal and per acre are factors that affect farm incomes.

Table 21. MEASURES OF RATES OF PRODUCTION
570 New York Dairy Farms, 1977

Item	My Farm Acres	My Farm Yield	Av. 570 Farms Acres*	Av. 570 Farms Yield	Average Yield Top 10% Farms
Milk sold per cow (lbs.)	_____	_____	--	13,600	14,400
All hay crops (tons H.E./A.)	_____	_____	119	2.3	3.0
Corn silage (tons/A.)	_____	_____	59	14.1	15.5
All forage crops (tons H.E./A.)	_____	_____	175	3.1	3.8
Grain corn (bu./A.)	_____	_____	65	89	97
Oats (bu./A.)	_____	_____	26	50	49

* Average for farms reporting the crop.

Pounds of milk sold per cow is calculated by dividing the total pounds of milk sold for the year by the average number of cows. No adjustment is made for differences in test of the milk.

Tons of hay crops per acre is calculated by adding the hay equivalent of hay crop silage and green chop to the dry hay and dividing by the total acres used for hay crops.

Tons of hay equivalent per acre of all forages is determined by adding tons of hay equivalent of corn silage to the tons of hay crops and dividing the total tons of hay equivalent from all roughage by the total acres used for roughages. This measure indicates how intensively the roughage land is used.

Studies have shown repeatedly that farms with higher rates of production tend to have higher labor incomes. In 1977, the farms that sold more milk per cow tended to be larger, bought more feed per cow, and in general had higher incomes.

Table 22. MILK SOLD PER COW AND LABOR AND MANAGEMENT INCOME
570 New York Dairy Farms, 1977

Pounds of Milk Sold Per Cow	Number of Farms	Number of Cows	Feed Bought Per Cow	Labor & Management Income Per Operator	Labor & Management Income Per Cow
Under 10,000	52	45	$267	$-4,500	$-111
10,000 - 10,999	34	52	316	-350	-7
11,000 - 11,999	61	61	312	1,940	36
12,000 - 12,999	86	63	357	1,400	26
13,000 - 13,999	125	80	370	4,300	64
14,000 - 14,999	82	84	386	4,200	71
15,000 - 15,999	82	82	445	7,000	110
16,000 and over	48	72	474	4,900	87

Labor Efficiency

Labor inputs account for about one-sixth of the costs in producing milk. Therefore, it is important that labor be used efficiently. Accomplishments per worker are used to measure labor efficiency. This is an important factor affecting labor and management incomes.

Table 23. MEASURES OF LABOR EFFICIENCY
570 New York Dairy Farms, 1977

Measure	My Farm	Av. 570 Farms	Av. Top 10% Farms
Number of cows per man	_____	28	34
Pounds of milk sold per man	_____	385,920	496,200
Work units per man	_____	314	376
Crop acres per man	_____	88	93

Pounds of milk sold per man is determined by dividing the total pounds of milk sold by the man equivalent. This is probably the best measure of labor efficiency for dairy farms.

Labor accomplishments (efficiency) depends on a number of things. Among these are the amount of mechanization, the field and building layout, the work methods used, and the abilities of the workers. All of these are management items under the control of the operator.

The 10 percent of the farms with the highest labor and management incomes per operator were considerably above the average of all 570 farms in the four measures of labor efficiency. The top 10 percent sold 29% more milk per man than the average of all farms.

The relationship of labor efficiency to labor income was generally positive on the 570 farms. The higher output per man was achieved by more and better cows.

Table 24. MILK SOLD PER MAN AND LABOR AND MANAGEMENT INCOME
570 New York Dairy Farms, 1977

Pounds of Milk Sold Per Man	Number of Farms	Number of Cows	Lbs. Milk Per Cow	Labor & Management Income Per Operator	Per Cow
Under 250,000	76	41	11,000	$-2,648	$-77
250,000 - 299,999	72	48	12,600	-390	-10
300,000 - 349,999	103	60	12,800	2,700	55
350,000 - 399,999	90	70	13,500	2,030	35
400,000 - 449,999	72	75	14,000	5,300	91
450,000 - 499,999	51	88	14,700	3,700	56
500,000 - 599,999	83	105	14,400	8,700	100
600,000 and over	23	124	15,200	8,100	93

Capital Efficiency

The average end-of-year inventory on the 570 farms was $284,210. This includes both owned and borrowed capital for all farms. More than one-third was borrowed. The use of credit is part of capital management. Since capital is a key input item, it is important to analyze the use of capital in the business. The analysis in this section examines how efficiently the capital was used.

Table 25. MEASURES OF CAPITAL EFFICIENCY
570 New York Dairy Farms, 1977

Measure	My Farm	Average 570 Farms	Average Top 10% Farms
Total capital per man	$_____	$113,684	$127,165
Total capital per cow	$_____	$4,003	$3,690
Machinery & equipment per cow	$_____	$778	$720
Land & building investment per cow	$_____	$2,137	$1,810
Land & building investment/crop acre owned	$_____	$1,039	$955
Total capital per cwt. milk sold	$_____	$29	$26
Capital turnover (capital ÷ receipts)	_____	2.6	2.2

Capital efficiency is often associated with size of herd. For this reason, the 570 farms were sorted on the basis of number of cows and the capital efficiency measures were calculated. There seemed to be a relationship between size and capital efficiency for the items machinery, real estate, and total capital per cow, and per cwt. of milk.

Table 26. SIZE OF HERD AND CAPITAL EFFICIENCY
570 New York Dairy Farms, 1977

Number of Cows	Number of Farms	Capital Investment Per Cow			Total Capital Per Cwt. Milk
		Total	Real Estate	Machinery	
Under 40	86	$4,200	$2,400	$840	$34
40 - 54	157	4,100	2,200	835	32
55 - 69	120	4,100	2,200	828	31
70 - 84	73	4,400	2,400	807	31
85 - 99	40	3,800	2,000	736	28
100 - 114	21	3,700	1,800	816	26
115 - 129	19	3,700	1,800	737	26
130 - 149	17	3,800	2,000	679	27
150 & over	37	3,800	2,000	688	27

Total capital investment per cow tends to decrease as the size of herd increases. Farms with fewer cows had larger investment per cow. Conversely, the farms with larger herds had less total capital per cwt. of milk sold.

Cost Control

Cost control is a factor in the successful operation of a modern dairy. Feed, machinery, labor, and capital are major cost items and are examined in detail. In times of rising costs, it is especially important to check all items both large and small. Profitable businesses usually maintain a "tight" control on all costs.

Feed Costs

Feed is the largest single expense item on New York Dairy farms. For the 570 farms in 1977, dairy concentrate accounted for 33% of the cash operating expenses so feed is the first item examined.

Dairy feed costs are affected by many things. There is no satisfactory single feed cost control measure so the feed situation is examined in the analysis of feed costs. Below are some measures related to feed costs on a dairy farm.

Table 27. ITEMS RELATED TO FEED COSTS
570 New York Dairy Farms, 1977

Item	My Farm	Average 570 Farms	Average Top 10% Farms
Feed bought per cow	$_____	$377	$373
Crop expense per cow	$_____	$107	$103
Feed bought per cwt. milk	$_____	$2.77	$2.59
Feed & crop expense per cwt. milk	$_____	$3.56	$3.31
% Feed is of milk sales	_____%	28%	26%
Hay equivalent per cow	_____T.	7.6T.	8.1T.
Crop acres per cow	_____	3.1	2.7
Fertilizer & lime per crop acre	$_____	$22	$24
Heifers as % of cow numbers	_____%	72%	75%

The average cost of feed bought per cow in 1977 was $377, while in 1976 it was $363. The percent that feed bought is of milk sales was 28% in 1977, and 27% in 1976.

The crop situation in 1977 was only fair. Tons of hay equivalent produced per cow was 7.6 tons which was .6 ton less than in 1976.

Feed costs include all feed for cows and heifers. Per cow costs are influenced markedly by the number of replacements on hand. Heifers as % of cow numbers must be considered when evaluating most of the per cow factors.

The ten percent of farms with highest labor and management incomes spent less for both crops and for feed bought than the 570 farm average. The top income farms also had costs per cwt. milk sold that were 25¢ less than the average of all farms.

Feed cost is influenced by a number of factors. On the production side, it is affected by the amount of homegrown grains, quality and quantity of the roughage, and the number of youngstock. On the purchasing side, it is influenced by the farmer's ability to purchase concentrates at reasonable prices.

Feed bought per cow is calculated by dividing the total expense for dairy concentrate by the average number of cows. Because this also includes the amount spent for calf and heifer feed, it actually represents the feed cost per cow and the replacements being raised.

Crop expense per cow is the total spent for fertilizer and lime, seeds and plants, spray, and other crop expense divided by the average number of cows. This represents the direct cash costs for growing feed.

Feed purchased as percent of milk receipts is calculated by dividing feed purchased by milk receipts. This measure can be used to determine whether the feed costs are in line. The amount of homegrown grain must be considered as you evaluate this measure. Milk prices also influence this factor.

Hay equivalent per cow is calculated by converting all hay crop silage, green chop, and corn silage to a dry hay equivalent and adding it to the tons of dry hay harvested. Total tons of hay equivalent is divided by the average number of cows.

Crop acres per cow is the total acres of cropland harvested divided by the average number of cows.

Heifers as percent of cow numbers is figured by dividing the number of heifers by the number of cows and multiplying by 100.

Table 28. PERCENT PURCHASED FEED IS OF MILK RECEIPTS AND LABOR AND MANAGEMENT INCOME
570 New York Dairy Farms, 1977

% Feed is of Milk	Number of Farms	Number of Cows	H.E. Per Cow	Lbs. Milk Per Cow	Labor & Management Income Per Operator
Over 40%	60	57	6.0	13,400	$-1,900
35 - 39	112	69	6.7	13,200	700
30 - 34	105	68	7.7	13,300	3,600
25 - 29	121	71	7.5	13,100	4,600
20 - 24	89	79	7.9	13,500	3,500
Under 20%	83	80	7.8	13,100	2,900

Generally, the lower the percent of the milk check going for purchased feed, the higher the income (table 28). From the 1977 data, the best income was for farms spending 25 to 29 percent of their milk check for feed. Farms with a lower percent of the milk check going for purchased feed had more tons of hay equivalent per cow, and in general had larger herds.

Machinery Costs

Machinery accounted for 18% of the farm inventory on these 570 farms, and the new purchases in 1977 averaged about $11,300 per farm. The cost of owning and operating this machinery accounted for one-sixth of the total farm expenses. An examination of the machinery costs is a key part of a systematic analysis of a dairy farm business.

Table 29. MACHINERY COST
570 New York Dairy Farms, 1977

Item	My Farm	Average 570 Farms Amount	Average 570 Farms Percent	Average Top 10% Farms
Depreciation (from p.7)	$_____	$ 5,783	32	$ 7,510
Interest @ 7% on av. inventory	_____	3,680	20	5,182
Machine hire	_____	750	4	973
Machinery repairs	_____	4,740	26	7,387
Auto expense (farm share)	_____	327	2	340
Gas and oil	_____	2,987	16	4,304
Total Machinery Costs	$_____	$18,267	100	$25,696
Machinery cost:				
per cow	$_____	$257		$229
per cwt. milk sold	$_____	$1.89		$1.59

The machinery depreciation calculations were shown on page 7. Depreciation accounted for 32% of the total machinery costs and interest 20%. These two fixed cost items are often overlooked in a casual look at operating costs. Repairs were the second largest cost item and one which must be kept in line if costs are to be kept under control.

Machinery costs averaged $257 per cow, but 7 farms had costs of under $100, while 141 had costs of $300 and over. In general, the lower the machinery costs per cow, the higher the labor and management income per operator.

Table 30. MACHINERY COST PER COW AND LABOR AND MANAGEMENT INCOME
570 New York Dairy Farms, 1977

Machinery Cost Per Cow	Number of Farms	Percent of Farms	Labor & Management Income Per Operator
Under $100	7	1	$ 7,880
$100 - 149	39	7	2,930
150 - 199	111	20	5,560
200 - 249	139	24	5,350
250 - 299	133	23	1,740
300 & over	141	25	-2,180

Labor Costs

Labor costs are sometimes overlooked in a farm business analysis. This is understandable since the farm family often provides a large part of the labor input. On these 570 farms, the family (including paid family labor) provided 70% of the months of labor inputs, while hired nonfamily labor provided 30% (page 6). Family labor does have a value and in this section an analysis is made of the cost of all labor inputs.

Table 31. LABOR COSTS
570 New York Dairy Farms, 1977

Item	My Farm	Average 570 Farms Amount	Average 570 Farms Percent	Average Top 10% Farms
Value operator's labor (@ $600/month)	$_____	$ 9,000	49	$ 9,000
Hired labor expense (from p. 10) (includes paid family labor)	_____	8,066	44	16,210
Unpaid family labor @ $400/month	_____	1,200	7	800
Total Labor Costs	$_____	$18,266	100	$26,010
Labor cost per cow	$_____	$257		$232
Labor cost per cwt. milk	$_____	$1.89		$1.61
Cost per month hired labor	$_____	$672		$737
Cost per month all labor	$_____	$609		$667

The operator's labor was valued at $600 per month, and unpaid family labor was valued at $400 per month. These are relatively low, but the unpaid labor is usually children or wives who would find it difficult to earn more than this amount off the farm with the hours they have available for work.

Labor and machinery operate as a "team" on a modern farm. The challenge is to get a combination that will give a reasonable cost per unit of milk sold. On these 570 farms, the labor and the machinery costs were the same. The labor and machinery costs for the top 10% farms were 58¢ per cwt. of milk, less than the average for all farms.

Table 32. LABOR AND MACHINERY COSTS
570 New York Dairy Farms, 1977

Item	My Farm	Average 570 Farms	Average Top 10% Farms
Total labor cost	$_____	$18,266	$26,010
Total machinery cost	_____	18,267	25,696
Total Labor and Machinery Costs	$_____	$36,533	$51,706
Labor and machinery cost per cow	$_____	$515	$461
Labor and machinery cost/cwt. milk	$_____	$3.78	$3.20

Combination of Factors

Individual factors have been examined in the analysis up to this point. It has been suggested that these factors are interrelated. In this section, the combination of four important factors is studied. The factors used here are size, rates of production, labor efficiency, and cost control as measured by number of cows, pounds of milk sold per cow, pounds of milk sold per man, and percent purchased feed was of milk receipts.

For each factor, the farms were divided on the basis of whether they were above or below the average for the 570 farms. They were then grouped on the basis of the number of factors better than average. The combination of factors above or below average within the three middle groups varied.

Table 33. COMBINATION OF FACTORS ABOVE AVERAGE* AND LABOR AND MANAGEMENT INCOME
570 New York Dairy Farms, 1977

Number of Factors Above Average	Number of Farms	Percent of Farms	Labor & Management Income Per Operator
4 Factors better than average	65	11%	$ 6,000
3 Factors better than average	112	20	7,500
2 Factors better than average	150	26	1,700
1 Factor better than average	159	28	1,000
0 Factors better than average	84	15	-2,200

* Factors were:
Size - number of cows - average 71.
Rates of production - pounds of milk sold per cow - average 13,600
Labor efficiency - pounds of milk sold per man - average 386,000
Cost control - percent purchased feed was of milk receipts - average 28%

The relationship between the number of factors better than average and labor and management income is shown in table 33. As the number of factors better than average decreased, labor incomes decreased at a rapid rate. It is important in managing a farm business to give attention to all major factors affecting the business. Concentrating on only one or two factors and neglecting the others will not give the kind of net return most farmers want.

Farm Business Chart

The Farm Business Chart is a tool which can be used in analyzing a business to determine the strong and weak points. The figure at the top of each column is the average of the top 10 percent of the 570 farms for that factor. The other figures in each column are the average for the second 10 percent, third 10 percent, etc. Each column of the chart is independent of the others. The farms which are in the top 10 percent for one factor would not necessarily be the same farms which make up the top 10 percent for any other factor.

FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS
570 New York Dairy Farms, 1977

Size of Business			Rates of Production			Labor Efficiency	
Man Equiv-alent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crops Per Acre	Tons Corn Silage Per Acre	Cows Per Man	Pounds Milk Sold Per Man
5.1	174	2,465,400	16,800	4.6	22	43	602,900
3.4	105	1,501,900	15,500	3.4	17	37	518,700
2.9	82	1,162,700	14,800	2.9	16	33	467,600
2.6	70	968,800	14,100	2.6	15	31	420,000
2.3	62	842,600	13,600	2.3	14	29	386,800
2.1	55	733,400	13,200	2.1	13	27	353,200
2.0	49	638,900	12,700	1.9	12	26	325,500
1.7	45	556,000	11,900	1.7	10	23	296,200
1.5	39	457,300	10,900	1.4	9	21	257,900
1.2	30	321,100	8,900	1.0	6	17	186,900

Feed Bought		Machinery Cost Per Cow	Labor and Machinery Cost Per Cow	Feed and Crop Expense Per Cwt. Milk
Per Cow	% of Milk Receipts			
$153	13%	$129	$341	$2.14
236	20	171	400	2.77
289	23	196	432	3.06
325	26	218	465	3.27
354	28	236	492	3.45
389	30	256	517	3.64
422	33	278	547	3.87
464	36	299	582	4.10
512	38	343	638	4.40
614	44	440	758	5.03

The cost control factors are ranked from low to high, but the lowest cost is not necessarily the most profitable. Many things affect the level of costs, and these items must be taken into account when analyzing the factors.

This chart can be used to analyze a dairy business by drawing a line through the figure in each column which represents the level of management for this farm.

SUPPLEMENTAL INFORMATION

Age of Individual Operators

Age of operator is a factor that affects management. Data on age of operator and business factors are on page 29.

Financial Situation

The debt situation affects what an operator can do. Information on percent equity and debt per cow and its relation to business factors is reported on pages 30 and 31.

Cost of Producing Milk

The cost of producing milk can be calculated from the farm business summary when the operations have dairy as the only principal enterprise. The average cost in 1977 for the 570 farms is shown on page 32 with comparisons by herd size and rates of production on page 33.

Comparison by Herd Size

In analyzing an individual farm business, it is helpful to compare it with businesses of similar size. The business summary, business factors, and financial situation for nine herd size groups are shown on pages 34 to 39.

Farms With Free Stall Barns

The 1977 Summary reported 191 farms with free stall barns. Comparisons of the farms with free stall and stanchion barn facilities are on page 40.

Milking Systems

Cooperators report the kind of milking system they use. The 570 farms were sorted by type of milking system and factors are reported on page 41.

Type of Business Organization

Summaries for the three business types; individual operators, partnerships, and corporations are on pages 42 and 43.

Same Farms for 1976 and 1977

There is some turnover each year in the cooperators in the business management projects. Of the 570 farms in the 1977 Summary, 408 had been in the 1976 Summary. A comparison of the 1976 and 1977 businesses of the same 408 farms is reported on pages 44 and 45.

Trends

One way to observe trends is to compare similar business studies that have been made. On page 46, selected farm business summary factors are given for 1957, 1967, 1972, and 1977.

Operating Statements

An operating statement for the 10 percent of the farms with the highest labor incomes is on page 49. This shows what the "better" businesses did. Operating statements are included for the farms that had crop sales which were equal to 10 percent or more of the milk receipts and were classified as "dairy-cash crop" operations, and for the "renter" operators (see pages 47 and 48). A statement for the average of the 570 farms is on page 50, and the average per cow figures are on page 51.

Age of Individual Operators

Table 34. AGE OF INDIVIDUAL OPERATORS AND LABOR INCOME
570 New York Dairy Farms, 1977

Age of Individual Operator	Number of Farms	Number of Cows	Lbs. Milk Sold Per Cow	Lbs. Milk Sold Per Man	Labor & Management Income Per Operator
Under 30	46	47	12,700	340,500	$ -120
30 to 34	75	60	13,400	371,100	3,866
35 to 39	85	69	14,000	398,800	4,385
40 to 44	92	62	13,500	371,800	1,694
45 to 49	71	73	13,800	389,400	2,299
50 to 54	44	71	13,200	363,700	-1,101
55 to 59	29	68	13,400	352,400	1,483
60 & over	16	68	12,500	317,200	444

Table 35. AGE OF INDIVIDUAL OPERATOR AND RELATED BUSINESS FACTORS
570 New York Dairy Farms, 1977

Age of Individual Operator	Percent Free stall Barns	Total Capital Per Cow	Feed Bought Per Cow	Machinery Cost Per Cow	Labor Cost Per Cow	Total Expense Per Cow
Under 30	13%	$3,800	$376	$260	$212	$1,400
30 to 34	19	3,900	387	250	218	1,440
35 to 39	40	4,000	423	240	229	1,510
40 to 44	25	4,100	353	276	233	1,470
45 to 49	31	4,100	370	259	242	1,490
50 to 54	39	4,100	371	255	250	1,470
55 to 59	38	3,900	373	255	244	1,460
60 & over	19	3,400	393	212	299	1,400

Table 36. AGE OF INDIVIDUAL OPERATOR AND FINANCIAL SITUATION
570 New York Dairy Farms, 1977

Age of Individual Operator	Total Farm Inventory	Percent Equity	Debt Per Cow	% Milk For Debt Payment	Available For Debts & Living
Under 30	$179,560	43%	$2,290	30%	$16,500
30 to 34	233,430	54	1,840	22	25,250
35 to 39	275,769	58	1,760	23	30,100
40 to 44	254,767	65	1,530	20	27,700
45 to 49	298,637	68	1,400	18	30,900
50 to 54	293,893	71	1,300	17	25,900
55 to 59	263,742	84	705	11	30,100
60 & over	229,563	87	535	10	23,200

Financial Situation

Each cooperator submits a financial statement as a part of the business record. A general summary is on pages 15 and 16. A brief analysis by percent equity and debt per cow are reported here.

Table 37. DEBT PER COW AND LABOR AND MANAGEMENT INCOME
570 New York Dairy Farms, 1977

Debt Per Cow	Number of Farms	Number of Cows	Lbs. Milk Sold Per Cow	Lbs. Milk Sold Per Man	Labor & Management Income Per Operator
None	32	58	13,800	354,700	$6,700
$1 to $599	89	68	13,900	406,800	4,700
$600 to $1,199	110	77	14,000	417,500	6,900
$1,200 to $1,799	125	75	13,300	388,100	700
$1,800 to $2,399	100	73	13,400	391,400	2,300
$2,400 to $2,799	48	66	13,800	376,400	1,368
$2,800 and over	66	61	13,600	369,300	-520

Thirty-two or about five percent of the farms reported no debt. In general, the cooperators used credit with a wide variation in the amounts used. The farms were sorted on the basis of debt per cow. The farms with debts per cow of $600 to $1,200 had the highest labor income along with the largest number of cows, the most pounds of milk sold per cow and per man (table 37). The debt per cow seemed to relate closely to age of operator.

Table 38. DEBT PER COW AND RELATED BUSINESS FACTORS
570 New York Dairy Farms, 1977

Debt Per Cow	Age of Operator	Percent Equity	Debt Payment Per Cow	Debt Payment % Milk	Available for Debts and Living
None	48	100	$ 0	0%	$28,500
$1 to $599	44	92	84	6	31,600
$600 to $1,199	42	77	200	15	36,900
$1,200 to $1,799	41	65	271	21	31,400
$1,800 to $2,399	39	50	338	26	30,400
$2,400 to $2,799	38	47	389	29	25,100
$2,800 and over	36	33	434	33	21,900

There was a wide range in percent equity among the 570 farms. Ninety-eight had less than 40 percent equity and these were the younger operators. In general, the larger the percent equity, the higher the labor and management income per operator (table 39).

Table 39. PERCENT EQUITY AND LABOR AND MANAGEMENT INCOME
570 New York Dairy Farms, 1977

Percent Equity	Number of Farms	Number of Cows	Age of Operator	Debt Per Cow	Labor & Management Income Per Operator
Less than 40%	98	63	36	$2,800	$1,240
40 - 49	66	78	39	2,220	410
50 - 59	78	71	39	2,020	2,200
60 - 69	86	74	40	1,500	4,200
70 - 79	81	73	43	1,100	4,500
80 - 89	67	77	42	725	5,000
90 - 99	63	68	45	260	2,300
100%	31	58	48	0	6,300

Table 40. PERCENT EQUITY AND RELATED BUSINESS FACTORS
570 New York Dairy Farms, 1977

Percent Equity	Lbs. Milk Sold Per Cow	Lbs. Milk Sold Per Man	% Feed is of Milk	End Inventory Per Cow: Total Amount	End Inventory Per Cow: Land & Bldgs.	End Inventory Per Cow: Machinery & Equipt.
Less than 40%	13,200	369,000	31%	$3,800	$2,100	$710
40 - 49	13,000	381,000	28	3,800	2,100	660
50 - 59	13,600	398,000	30	4,200	2,300	770
60 - 69	13,800	408,000	28	4,000	2,100	840
70 - 79	13,800	433,000	27	4,100	2,100	830
80 - 89	14,200	410,000	27	4,200	2,300	830
90 - 99	13,700	372,000	27	4,100	2,100	850
100%	13,800	370,000	30	3,700	1,900	720

Table 41. PERCENT EQUITY AND DEBT PAYMENT SITUATION
570 New York Dairy Farms, 1977

Percent Equity	Available For Debts & Living	Scheduled Annual Debt Payments: Total Amount	Payments Per Cow	As Percent Milk	As Percent Available
Less than 40%	$22,500	$24,400	$390	31%	108%
40 - 49	29,400	27,250	350	28	93
50 - 59	28,400	23,380	330	25	82
60 - 69	34,200	20,000	270	20	58
70 - 79	33,900	17,000	230	17	50
80 - 89	38,300	12,900	170	12	34
90 - 99	30,200	4,900	70	5	16
100%	28,700	--	--	--	--

Farm operators with less than 50% equity have heavy debt commitments. Debt payments of $350 or more per cow and more than 25% of the milk receipts mean there is limited amounts left for operating purposes. Living has a high priority on available funds but the low equity farms averaged 93% and 108% of available funds needed for debt payments.

Cost of Producing Milk

The "farm unit" method is used here to compute cost of producing milk. Farm expenses include all costs except the operator's labor and management. Non-milk receipts are deducted on the assumption they were produced at cost.

Table 42. FARM COST OF PRODUCING MILK
570 New York Dairy Farms, 1977

Item	Av. 570 Farms		My Farm	
Total cash farm expenses (p. 10)	$ 80,646		$_____	
Machinery depreciation	5,783		_____	
Building depreciation	2,791		_____	
Unpaid labor	1,200		_____	
Interest on equity capital @ 7%	13,237		_____	
TOTAL FARM EXPENSES	$103,657		$_____	
Value Operator's Labor @ $600/mo.	9,000		_____	
TOTAL COST OF PRODUCTION (1)		$112,657		$_____
Total cash farm receipts (p. 8)	$104,243		$_____	
Less: Milk sales	94,165		_____	
Non-milk cash receipts	10,078		_____	
Increase feed & supplies	43		_____	
Increase of 1 cow @ $780	780		_____	
TOTAL OTHER INCOME (2)		10,901		_____
COST OF PRODUCING MILK (1 minus 2)		$101,756		$_____
Hundredweights of milk sold (p. 17)	9,648		_____	
COST OF PRODUCING CWT. MILK		$ 10.55		$_____
Management charge @ 5% cash receipts	$ 5,212		$_____	
Management charge cwt. milk	54¢		_____¢	
COST OF PRODUCING MILK WITH MGT. CHARGE		$ 11.09		$_____

Changes in cattle prices can cause a change in livestock inventories even though there are no changes in cattle numbers. To correct for this, the dollar change in livestock inventory is omitted and the change in cow numbers (increase of 1 cow) is valued at the average year-end livestock inventory value per cow (includes replacement heifers) and included as non-cash income. For 1977, the increase in value of the additional cow was $780, while the increase in livestock inventories was $3,109.

Table 43. COST OF PRODUCING MILK AND PRICES RECEIVED, 1972-1977

Year	Value Operator's Labor	Value Operator's Management*	Cost/Cwt. With Management Excluded	Cost/Cwt. With Management Included	Average Price Received	Average Price Reported
1972	$6,000	$3,275	$6.43	$6.80	$6.41	$6.25
1973	6,000	3,689	7.26	7.69	7.30	7.30
1974	6,000	4,330	8.34	8.82	8.57	8.24
1975	6,000	4,474	9.07	9.55	8.65	8.64
1976	6,000	5,162	9.87	10.42	9.90	9.71
1977	7,200	5,212	10.55	11.09	9.76	9.61

* Estimated @ 5% of cash receipts.

Farm expenses do not include any charge for management. The farm operator's labor is valued at hired worker rates. The management input is an important part of any business operation and is traditionally a part of the costs in business accounting. In this analysis, a management charge was computed on the basis of 5 percent of the cash receipts. In some areas, management services are provided for absentee owners on the basis of 5 to 8 percent of the receipts. The management charge amounted to an average of 54 cents per cwt. of milk.

Table 44. FARM COST OF PRODUCING MILK BY HERD SIZE
570 New York Dairy Farms, 1977

Number of Cows	Cost/Cwt. With Management		Average Price Received
	Excluded	Included	
Under 40	$11.87	$12.41	$9.68
40 to 54	10.76	11.29	9.64
55 to 69	10.54	11.08	9.73
70 to 84	10.33	10.87	9.81
85 to 99	10.33	10.87	9.71
100 to 114	10.38	10.92	9.71
115 to 129	9.74	10.29	9.89
130 to 149	9.88	10.42	9.76
150 & Over	10.25	10.80	9.88

Size is an important factor in the analysis of farm businesses. The costs of producing milk were computed for nine herd size groups (table 44). In general, the larger herds had lower costs. The average cost excluding management was $11.87 for herds with under 40 cows, while it was $9.74 for those with 115 to 129 cows, or a difference of $2.13 per cwt.

Rates of milk production is also a major business factor so costs were computed by levels of production (table 45). The spread here was even greater than for size. Farms selling less than 10,000 pounds of milk per cow had an average cost of production of $13.59, while those selling 15,000 to 15,999 averaged $9.92 or a difference of $3.67 per cwt.

Table 45. FARM COST OF PRODUCING MILK BY MILK SOLD PER COW
570 New York Dairy Farms, 1977

Pounds of Milk Sold Per Cow	Cost/Cwt. With Management		Average Price Received
	Excluded	Included	
Under 10,000	$13.59	$14.15	$10.06
10,000 to 10,999	11.85	12.40	10.01
11,000 to 11,999	10.88	11.42	9.78
12,000 to 12,999	10.76	11.30	9.74
13,000 to 13,999	10.29	10.83	9.76
14,000 to 14,999	10.28	10.82	9.72
15,000 to 15,999	9.92	10.46	9.77
16,000 and over	10.20	10.75	9.65

Table 46. FARM BUSINESS SUMMARY BY HERD SIZE
570 New York Dairy Farms, 1977

Item	Farms with: Less Than 40 Cows	40 to 54 Cows	55 to 69 Cows	70 to 84 Cows
Capital Investment (end of year)				
Livestock	$ 24,283	$ 37,180	$ 47,535	$ 60,072
Feed and supplies	6,495	11,339	16,250	25,690
Machinery and equipment	26,915	38,431	50,484	60,537
Land and buildings	76,576	103,258	134,514	182,777
TOTAL INVESTMENT	$134,269	$190,208	$248,783	$329,076
Receipts				
Milk sales	$ 38,308	$ 57,368	$ 79,144	$104,568
Dairy cattle sold	2,639	3,463	5,200	6,814
Other livestock sales	890	984	1,143	1,360
Crop sales	199	447	662	674
Miscellaneous receipts	818	1,056	1,386	2,076
Total Cash Receipts	$ 42,854	$ 63,318	$ 87,535	$115,492
Increase in livestock	1,149	2,260	2,712	3,172
Increase in feed & supplies	---	428	---	813
TOTAL FARM RECEIPTS	$ 44,003	$ 66,006	$ 90,247	$119,477
Expenses				
Hired labor	$ 1,024	$ 2,533	$ 4,993	$ 9,192
Dairy feed	12,417	17,288	22,833	27,759
Other feed	515	896	743	1,223
Machine hire	266	438	576	704
Machinery repair	1,776	2,702	3,807	5,222
Auto expense (farm share)	241	310	315	286
Gas and oil	1,367	1,821	2,584	3,194
Purchased animals	1,707	1,996	2,305	1,977
Breeding fees	540	756	1,011	1,440
Veterinary and medicine	643	948	1,259	1,734
Milk marketing	854	1,252	1,763	2,784
Other livestock expense	1,281	1,995	2,685	3,801
Fertilizer and lime	1,430	2,583	3,829	5,506
Seeds and plants	534	872	1,259	1,716
Spray and other crop expense	343	696	1,056	1,177
Land, bldg., fence repair	641	908	1,335	1,768
Taxes and insurance	2,090	2,716	3,666	4,883
Electric & phone (farm share)	1,042	1,459	1,827	2,429
Interest paid	2,821	4,852	6,219	7,722
Miscellaneous expenses	945	1,236	2,014	2,656
Total Cash Expenses	$ 32,477	$ 48,257	$ 66,079	$ 87,173
Machinery depreciation	2,751	3,755	5,175	5,970
Building depreciation	1,052	1,584	2,324	2,689
Unpaid family labor	1,400	1,400	1,050	700
Interest on equity @ 7%	6,565	8,420	11,486	15,685
Decrease in feed & supplies	804	---	517	---
TOTAL FARM EXPENSES	$ 45,049	$ 63,416	$ 86,631	$112,217
Financial Summary				
Total Farm Receipts	$ 44,003	$ 66,006	$ 90,247	$119,477
Total Farm Expenses	45,049	63,416	86,631	112,217
Labor & Mgt. Income	$ -1,046	$ 2,590	$ 3,616	$ 7,260
Number of operators	1.02	1.11	1.23	1.33
LABOR & MGT. INCOME/OPERATOR	$ -1,022	$ 2,338	$ 2,933	$ 5,467

Table 46. contd.

FARM BUSINESS SUMMARY BY HERD SIZE
570 New York Dairy Farms, 1977

Item	Farms with: 85 to 99 Cows	100 to 114 Cows	115 to 129 Cows	130 to 149 Cows	150 or More Cows
Capital Investment (end of year)					
Livestock	$ 74,862	$ 82,885	$ 96,375	$103,330	$155,071
Feed and supplies	25,502	33,463	40,358	46,371	67,679
Machinery and equipment	67,001	84,841	88,398	94,406	132,690
Land and buildings	181,783	183,803	220,344	283,255	380,603
TOTAL INVESTMENT	$349,148	$384,992	$445,475	$527,362	$736,043
Receipts					
Milk sales	$119,537	$145,139	$167,767	$190,840	$269,747
Dairy cattle sold	7,714	8,087	11,313	11,559	17,249
Other livestock sales	1,379	3,151	1,967	3,322	3,002
Crop sales	953	1,076	1,827	1,624	3,177
Miscellaneous receipts	2,525	2,717	2,927	3,398	6,719
Total Cash Receipts	$132,108	$106,170	$185,801	$210,743	$299,894
Increase in livestock	3,921	5,237	6,197	2,378	9,082
Increase in feed & supplies	---	---	3,894	1,414	---
TOTAL FARM RECEIPTS	$136,029	$165,407	$195,892	$214,535	$308,976
Expenses					
Hired labor	$ 9,551	$ 13,979	$ 17,849	$ 24,419	$ 38,160
Dairy feed	35,763	40,345	48,350	54,614	64,436
Other feed	2,906	1,993	723	1,107	3,217
Machine hire	999	1,512	923	1,716	2,621
Machinery repair	6,177	8,621	8,439	10,363	14,117
Auto expense (farm share)	515	562	305	358	381
Gas and oil	3,700	5,433	4,988	5,473	8,270
Purchased animals	3,207	6,027	3,750	3,800	5,604
Breeding fees	1,360	1,692	2,198	2,924	2,892
Veterinary and medicine	2,082	2,666	3,209	3,743	5,785
Milk marketing	2,561	3,566	4,953	4,441	8,046
Other livestock expense	3,856	5,532	4,870	6,248	10,487
Fertilizer and lime	6,175	9,117	8,759	8,577	15,573
Seeds and plants	2,207	2,783	2,533	2,872	4,476
Spray and other crop expense	1,447	2,448	2,349	2,927	4,748
Land, bldg., fence repair	1,896	1,965	2,543	3,873	4,111
Taxes and insurance	5,155	5,276	8,094	7,670	11,773
Electric & phone (farm share)	2,664	3,051	3,303	3,328	4,563
Interest paid	8,262	11,913	10,824	11,854	17,780
Miscellaneous expenses	3,624	4,003	4,010	4,285	7,023
Total Cash Expenses	$104,107	$132,484	$142,972	$164,592	$239,063
Machinery depreciation	6,699	10,122	7,756	10,714	16,319
Building depreciation	3,196	4,599	4,892	6,213	9,548
Unpaid family labor	700	1,050	700	350	700
Interest on equity @ 7%	16,175	15,440	21,008	25,955	35,776
Decrease in feed & supplies	316	1,284	---	---	787
TOTAL FARM EXPENSES	$131,193	$164,979	$177,328	$207,824	$302,193
Financial Summary					
Total Farm Receipts	$136,029	$165,407	$195,892	$214,535	$308,976
Total Farm Expenses	131,193	164,979	177,328	207,824	302,193
Labor & Mgt. Income	$ 4,836	$ 428	$ 18,564	$ 6,711	$ 6,783
Number of operators	1.40	1.33	1.58	1.29	1.51
LABOR & MGT. INCOME/OPERATOR	$ 3,454	$ 321	$ 11,764	$ 5,186	$ 4,483

Table 47. SELECTED BUSINESS FACTORS BY HERD SIZE
570 New York Dairy Farms, 1977

Item	Farms with: Less Than 40 Cows	40 to 54 Cows	55 to 69 Cows	70 to 84 Cows
Number of farms	86	157	120	73
Size of Business				
Number of cows	32	46	61	75
Number of heifers	22	32	44	55
Pounds of milk sold	395,600	595,100	813,200	1,065,400
Man equivalent	1.5	1.8	2.2	2.7
Total work units	360	512	680	839
Total crop acres	105	149	199	239
Crop acres rented	(17)	(30)	(57)	(55)
Rates of Production				
Milk sold per cow	12,360	12,900	13,300	14,200
Tons hay crops per acre	1.7	2.0	2.2	2.3
Tons corn silage per acre	11.4	13.3	13.5	14.6
Bushels of oats per acre	50	45	48	58
Labor Efficiency				
Cows per man	21	25	28	28
Pounds milk sold per man	263,700	325,200	374,700	399,000
Work units per man	240	280	313	314
Feed Costs				
Feed purchased per cow	$388	$376	$374	$370
Crop expense per cow	$72	$90	$101	$112
Feed cost per cwt. milk	$3.14	$2.91	$2.81	$2.61
Feed & crop exp./cwt. milk	$3.72	$3.60	$3.56	$3.39
% feed is of milk receipts	32%	30%	29%	27%
Hay equivalent per cow	6.2	7.2	7.6	7.8
Crop acres per cow	3.3	3.2	3.3	3.2
Fertilizer & lime/crop acre	$14	$17	$19	$23
Machinery and Labor Costs				
Total machinery costs	$8,229	$11,599	$15,844	$19,383
Machinery cost per cow	$257	$252	$260	$258
Machinery cost/cwt. milk	$2.08	$1.95	$1.95	$1.82
Labor cost per cow	$263	$227	$222	$239
Labor cost per cwt. milk	$2.13	$1.75	$1.67	$1.68
Capital Efficiency				
Investment per man	$89,500	$103,900	$114,650	$123,250
Investment per cow	$4,200	$4,100	$4,100	$4,400
Investment per cwt. milk	$34	$32	$31	$31
Land & buildings per cow	$2,390	$2,245	$2,200	$2,400
Machinery investment/cow	$840	$835	$828	$807
Capital turnover	3.1	2.9	2.8	2.8
Other				
Price per cwt. milk sold	$9.68	$9.64	$9.73	$9.81
Acres hay crops	78	92	115	132
Acres corn silage	20	35	50	60
Inventory changes 1977*:				
Number of cows	+1	+1	+2	0
Invt. value per cow**	+$13	+$32	+$20	+$11

* Change from 1/1/77 to 1/1/78.

** Livestock inventory includes heifers.

Table 47. contd. SELECTED BUSINESS FACTORS BY HERD SIZE
570 New York Dairy Farms, 1977

Item	Farms with: 85 to 99 Cows	100 to 114 Cows	115 to 129 Cows	130 to 149 Cows	150 or More Cows
Number of farms	40	27	19	17	37
Size of Business					
Number of cows	91	104	120	139	193
Number of heifers	67	76	85	95	148
Pounds of milk sold	1,231,700	1,495,000	1,696,900	1,955,900	2,729,000
Man equivalent	2.8	3.2	3.6	3.9	5.6
Total work units	1,010	1,172	1,318	1,490	2,108
Total crop acres	273	337	366	371	532
Crop acres rented	(68)	(150)	(127)	(116)	(161)
Rates of Production					
Milk sold per cow	13,540	14,400	14,140	14,100	14,140
Tons hay crops per acre	2.4	2.7	2.3	2.4	3.3
Tons corn silage/acre	13.8	14.3	15.6	14.7	14.9
Bushels oats/acre	52	31	42	31	59
Labor Efficiency					
Cows per man	32	33	34	35	35
Pounds milk sold/man	435,230	471,610	474,000	499,000	489,100
Work units per man	357	370	368	380	378
Feed Costs					
Feed purchased per cow	$393	$388	$403	$393	$360
Crop expense per cow	$108	$138	$114	$103	$128
Feed cost per cwt. milk	$2.90	$2.70	$2.85	$2.79	$2.54
Feed & crop exp./cwt. milk	$3.70	$3.66	$3.65	$3.53	$3.45
% feed is of milk receipts	30%	28%	29%	29%	26%
Hay equivalent per cow	7.4	8.3	7.8	7.5	8.1
Crop acres per cow	3.0	3.2	3.1	2.7	2.8
Fertilizer & lime/crop acre	$23	$27	$24	$23	$29
Machinery and Labor Costs					
Total machinery costs	$22,639	$31,820	$28,298	$34,836	$50,387
Machinery cost per cow	$249	$306	$236	$251	$260
Machinery cost/cwt. milk	$1.84	$2.13	$1.67	$1.78	$1.85
Labor cost per cow	$206	$217	$234	$236	$248
Labor cost/cwt. milk	$1.52	$1.51	$1.65	$1.68	$1.75
Capital Efficiency					
Investment per man	$123,370	$121,400	$124,430	$134,530	$131,910
Investment per cow	$3,840	$3,700	$3,700	$3,800	$3,800
Investment/cwt. milk	$28	$26	$26	$27	$27
Land & buildings/cow	$2,000	$1,770	$1,840	$2,040	$1,970
Machinery investment/cow	$740	$820	$740	$680	$690
Capital turnover	2.6	2.3	2.3	2.5	2.4
Other					
Price per cwt. milk sold	$9.71	$9.71	$9.89	$9.76	$9.88
Acres hay crops	139	171	176	182	213
Acres corn silage	73	82	103	124	173
Inventory changes 1977*:					
Number of cows	+2	+5	+2	+4	+4
Invt. value per cow**	+$26	+$16	+$39	-$4	+$31

* Change from 1/1/77 to 1/1/78.
** Livestock inventory includes heifers.

Table 48. FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
570 New York Dairy Farms, January 1, 1978

Item	Farms with: Less than 40 Cows	40 to 54 Cows	55 to 69 Cows	70 to 84 Cows
Number of farms	86	157	120	73
Assets				
Livestock	$ 24,284	$ 37,181	$ 47,536	$ 60,073
Feed and supplies	6,496	11,339	16,250	25,690
Machinery & equipment	26,915	38,432	50,484	60,538
Land and buildings	76,576	103,259	134,515	182,777
Co-op investment	1,304	1,554	2,234	4,758
Accounts receivable	2,117	3,853	5,153	7,789
Cash & checking accounts	1,348	1,140	1,553	2,453
Total Farm Assets	$139,040	$196,758	$257,725	$344,078
Savings accounts	3,636	1,772	4,291	5,748
Cash value life insurance	3,243	2,960	2,533	3,929
Stocks and bonds	3,221	678	2,131	2,851
Nonfarm real estate	1,979	1,519	4,153	4,378
Auto (personal share)	809	899	901	790
All other	1,531	1,468	1,648	1,023
Total Nonfarm Assets	$ 14,419	$ 9,296	$ 15,657	$ 18,719
TOTAL ASSETS	$154,459	$206,054	$273,382	$362,797
Liabilities				
Real estate mortgage	$ 25,568	$ 46,521	$ 50,804	$ 68,107
Liens on cattle & equipt.	14,818	22,538	31,848	40,606
Installment contracts	1,821	2,029	2,325	3,370
Notes & other farm debts	3,043	5,381	8,667	7,919
Total Farm Liabilities	$ 45,250	$ 76,469	$ 93,644	$120,002
Nonfarm Liabilities	519	675	1,973	662
TOTAL LIABILITIES	$ 45,769	$ 77,144	$ 95,617	$120,664
Farm Net Worth (Equity Capital)	$ 93,790	$120,289	$164,081	$224,076
FAMILY NET WORTH	$107,690	$128,910	$177,765	$242,133
Financial Measures				
Percent equity	70%	63%	65%	67%
Farm debt per cow	$1,414	$1,660	$1,535	$1,600
Available for debt service and living	$13,192	$19,910	$27,670	$36,034
Scheduled annual debt payment	$7,567	$11,965	$15,729	$21,015
Scheduled debt payment/cow	$236	$260	$258	$280
Scheduled debt payment as % of milk check	20%	21%	20%	20%

Table 48. contd. FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
570 New York Dairy Farms, January 1, 1978

Item	Farms with: 85 to 99 Cows	100 to 114 Cows	115 to 129 Cows	130 to 149 Cows	150 or More Cows
Number of farms	40	21	19	17	37
Assets					
Livestock	$ 74,862	$ 82,886	$ 96,376	$103,331	$115,072
Feed and supplies	25,503	33,463	40,359	46,371	67,679
Machinery & equipment	67,001	84,842	88,398	94,407	132,691
Land and buildings	181,784	183,803	220,345	283,255	380,604
Co-op investment	5,120	5,904	7,637	8,731	12,752
Accounts receivable	7,334	10,002	13,150	11,305	22,994
Cash & checking accounts	2,201	1,522	2,711	3,100	3,772
Total Farm Assets	$363,805	$402,422	$468,976	$550,500	$775,564
Savings accounts	2,209	1,123	6,633	5,220	2,635
Cash value life insurance	2,432	5,195	1,965	7,144	2,023
Stocks and bonds	5,253	1,716	627	5,704	2,379
Nonfarm real estate	2,787	4,761	3,657	10,421	5,364
Auto (personal share)	890	857	489	1,718	1,295
All other	1,087	1,680	8,066	2,516	4,669
Total Nonfarm Assets	$ 14,658	$ 15,332	$ 21,437	$ 32,723	$ 18,365
TOTAL ASSETS	$378,463	$417,754	$490,413	$583,223	$793,929
Liabilities					
Real estate mortgage	$ 67,395	$ 82,041	$101,663	$ 99,432	$140,950
Liens on cattle & equipt.	50,120	66,069	49,499	71,825	100,064
Installment contracts	6,406	5,595	2,906	1,899	3,405
Notes and other farm debt	8,816	28,146	14,793	6,562	20,054
Total Farm Liabilities	$132,737	$181,851	$168,861	$179,718	$264,473
Nonfarm Liabilities	974	3,872	789	1,421	4,500
TOTAL LIABILITIES	$133,711	$185,723	$169,650	$181,139	$268,973
Farm Net Worth (Equity Capital)	$231,068	$220,571	$300,115	$370,782	$511,091
FAMILY NET WORTH	$244,752	$232,031	$320,763	$402,084	$524,956
Financial Measures					
Percent equity	65%	56%	65%	69%	66%
Farm debt per cow	$1,440	$1,730	$1,410	$1,290	$1,370
Available for debt service and living	$36,260	$39,590	$53,640	$58,000	$78,600
Scheduled annual debt paymts	$22,550	$32,980	$26,390	$29,330	$46,850
Scheduled debt payment/cow	$245	$314	$220	$210	$240
Scheduled debt payment as % of milk check	19%	23%	16%	15%	17%

Table 49. COMPARISON OF FARMS BY TYPE OF BARN AND HERD SIZE
570 New York Dairy Farms, 1977

Item	Herd Size (Number Cows)				
	Under 55	55-69	70-99	100-149	150 & Over
Number of farms					
Free stall	16	29	60	50	36
Other	227	91	53	7	1
Number of men					
Free stall	1.9	2.1	2.7	3.4	5.4
Other	1.8	2.3	2.8	3.8	---
Land & bldgs./cow					
Free stall	$2,300	$2,260	$2,100	$1,900	$2,000
Other	$2,300	$2,200	$2,400	$1,600	---
Tons hay crops/acre					
Free stall	2.0	2.4	2.4	2.4	3.3
Other	1.9	2.1	2.3	2.9	---
Lbs. milk sold/cow					
Free stall	12,900	13,800	13,600	14,100	14,200
Other	12,700	13,400	14,300	15,100	---
Lbs. milk sold/man					
Free stall	302,000	403,300	418,800	494,400	505,300
Other	297,500	357,800	399,600	470,200	---
Labor cost/cow					
Free stall	$230	$204	$213	$228	$246
Other	$241	$232	$242	$220	---
Machinery cost/cow					
Free stall	$267	$283	$250	$258	$257
Other	$251	$257	$260	$307	---
Veterinary cost/cow					
Free stall	$17	$23	$24	$25	$30
Other	$21	$20	$22	$34	---
Feed & crop expense/cow					
Free stall	$416	$480	$504	$509	$493
Other	$465	$481	$475	$539	---
Debt/cow					
Free stall	$1,600	$1,750	$1,500	$1,500	$1,300
Other	$1,600	$1,500	$1,600	$1,100	---
Labor & Mgt. income/op.					
Free stall	$2,810	$5,130	$4,500	$5,400	$5,400
Other	$1,100	$1,800	$4,700	$8,400	---

A total of 191 of the 570 farms in this study reported having free stall barns. A comparison has been made by size of herd and type of barn for selected business factors.

Table 50. SELECTED BUSINESS FACTORS BY MILKING SYSTEMS
570 New York Dairy Farms, 1977

Item	Bucket and Carry	Dumping Station	Pipeline	Herringbone Parlor	Other Parlors
Number of farms	16	179	201	145	29
Percent of farms	3%	31%	35%	26%	5%
Capital Invest. (end of year)					
Livestock	$ 21,070	$ 37,771	$ 50,497	$ 88,167	$ 70,456
Feed & supplies	5,805	10,782	18,300	37,462	28,029
Machinery & equipt.	25,537	35,480	53,893	82,968	64,100
Land & buildings	81,345	103,961	138,895	230,543	180,677
TOTAL INVESTMENT	$133,757	$187,994	$261,585	$439,140	$343,262
Financial Summary					
Total Farm Receipts	$ 37,294	$ 65,523	$ 97,334	$175,844	$136,193
Total Farm Expenses	38,808	63,948	94,283	168,609	128,998
Labor & Mgt. Income	$- 1,514	$ 1,575	$ 3,051	$ 7,235	$ 7,195
Number of operators	(18)1.1	(205)1.1	(232)1.2	(208)1.4	(36)1.2
LABOR & MGT. INC./OPER.	$- 1,346	$ 1,376	$ 2,644	$ 5,045	$ 5,798
Size of Business					
Number of cows	31	47	62	113	87
Number of heifers	22	33	45	84	60
Lbs. of milk sold	338,000	591,200	876,200	1,570,800	1,200,400
Man equivalent	1.6	1.9	2.3	3.4	2.8
Crop acres	91	154	197	332	273
Rates of Production					
Milk sold/cow (lbs.)	10,900	12,600	14,100	13,900	13,800
Tons hay crops/acre	1.9	1.9	2.2	2.7	2.6
Tons corn silage/acre	8.8	12.9	14.0	14.7	14.6
Labor Efficiency					
Cows per man	20	24	27	33	31
Lbs. milk sold/man	213,900	307,920	376,100	459,300	424,200
Costs					
Feed purchased/cow	$306	$377	$388	$373	$389
% Feed is of milk rec.	29%	31%	28%	27%	29%
Machinery cost/cow	$263	$245	$273	$257	$245
Labor cost/cow	$302	$240	$240	$230	$225
Capital Efficiency					
Investment/man	$84,660	$97,920	$112,270	$128,400	$121,300
Investment/cow	$4,320	$4,000	$4,220	$3,900	$3,900
Land & bldgs./cow	$2,220	$2,200	$2,200	$2,040	$2,077
Machinery inv./cow	$825	$755	$869	$734	$737
Other					
Price/cwt. milk sold	$9.77	$9.67	$9.75	$9.82	$9.71

Table 51. FARM BUSINESS SUMMARIES FOR INDIVIDUALS, PARTNERSHIPS, AND CORPORATIONS
570 New York Dairy Farms, 1977

	Averages for: 458 Individuals		100 Partnerships		12 Corporations	
CAPITAL INVESTMENT						
	1/1/77	1/1/78	1/1/77	1/1/78	1/1/77	1/1/78
Livestock	$ 48,207	$ 50,851	$ 68,335	$ 73,288	$115,989	$121,416
Feed & supplies	18,442	18,412	27,650	28,687	59,157	53,727
Machinery & equipment	45,796	50,754	62,975	69,966	98,357	103,272
Land & buildings	129,245	137,848	170,559	185,127	381,218	404,136
TOTAL INVESTMENT	$241,690	$257,865	$329,519	$357,068	$654,721	$682,551
EXPENSES						
Labor						
Hired	$ 7,808		$ 7,464		$ 22,917	
Feed						
Dairy concentrate	24,634		32,971		55,246	
Hay and other	1,094		1,626		789	
Machinery						
Machine hire	689		930		1,574	
Machinery repair	4,173		6,556		11,245	
Auto expense	334		290		387	
Gas and oil	2,675		3,952		6,852	
Livestock						
Purchased animals	2,427		3,036		5,340	
Breeding fees	1,048		1,682		2,640	
Veterinary, medicine	1,483		2,302		4,175	
Milk marketing	2,041		2,821		9,372	
Other livestock exp.	2,864		4,282		11,697	
Crops						
Fertilizer & lime	4,138		6,585		13,605	
Seeds & plants	1,333		2,097		4,035	
Spray & other	1,153		1,723		2,533	
Real Estate						
Land, bldg., fence rep.	1,356		2,085		3,383	
Taxes	2,344		3,039		7,626	
Insurance	1,522		2,166		4,708	
Rent	1,058		1,912		3,670	
Other						
Telephone (farm share)	362		408		638	
Electric (farm share)	1,543		2,053		3,991	
Interest paid	6,588		7,473		16,275	
Miscellaneous	963		1,488		3,265	
TOTAL CASH EXPENSES	$73,630		$ 98,941		$195,963	
Machinery depreciation	$ 5,224		$ 7,311		$ 14,459	
Building depreciation	2,505		3,255		9,825	
Unpaid labor	1,400		350		---	
Interest on farm equity @ 7%	11,731		17,677		33,738	
Decrease in feed & supplies	30		---		5,430	
TOTAL FARM EXPENSES	$94,520		$127,534		$259,415	

Table 51. FARM BUSINESS SUMMARIES FOR INDIVIDUALS, PARTNERSHIPS, AND CORPORATIONS contd. 570 New York Dairy Farms, 1977

	Average for:		
	458 Individuals	100 Partnerships	12 Corporations
RECEIPTS			
Milk sales	$ 85,032	$120,548	$222,886
Crop sales	645	1,130	3,997
Dairy cattle sold	5,364	7,799	15,278
Livestock sales	1,226	2,021	2,531
Gas tax refund	127	249	161
Government payments	366	420	1,221
Work off farm	88	59	57
Custom machine work	122	196	0
Miscellaneous	1,008	1,343	3,901
TOTAL CASH RECEIPTS	$ 93,978	$133,765	$250,032
Increase in livestock	2,644	4,953	5,427
Increase in feed & supplies	---	1,037	---
TOTAL FARM RECEIPTS	$ 96,622	$139,755	$255,459
FINANCIAL SUMMARY			
Total Cash Receipts	$ 93,978	$133,765	$250,032
Total Cash Expenses	73,630	98,941	195,963
NET FARM CASH FLOW	$ 20,348	$ 34,824	$ 54,069
Total Farm Receipts	$ 96,622	$139,755	$255,459
Total Farm Expenses	94,528	127,534	259,415
LABOR & MGT. INCOME/FARM	$ 2,102	$ 12,221	$- 3,956
Number of operators	(458)1.0	(211)2.1	(30) 2.5
LABOR & MGT. INCOME/OPERATOR	$ 2,102	$ 5,792	$- 1,582
BUSINESS FACTORS			
Man equivalent	2.3	3.0	4.5
Number of cows	65	88	151
Number of heifers	47	64	114
Acres of hay crops	113	142	196
Acres of corn silage	54	73	120
Total acres of crops	198	287	452
Lbs. of milk sold	871,900	1,234,900	2,259,000
Lbs. of milk sold/cow	13,400	14,000	14,960
Tons hay crops/acre	2.2	2.5	2.9
Tons corn silage/acre	14.0	14.4	14.2
Cows per man	29	29	34
Lbs. of milk sold/man	387,500	411,630	502,000
% Feed is of milk sales	29%	27%	25%
Feed & crop exp./cwt. milk	$3.59	$3.51	$3.34
Fertilizer & lime/crop acre	$21	$23	$30
Machinery cost/cow	$253	$269	$275
Av. price/cwt. milk	$9.75	$9.76	$9.87

Table 52. COMPARISON OF FARM BUSINESS SUMMARIES FOR 1976 AND 1977
Same 408 New York Dairy Farms

	Averages 1976		Averages 1977	
CAPITAL INVESTMENT	1/1/76	1/1/77	1/1/77	1/1/78
Livestock	$ 48,822	$ 52,271	$ 52,368	$ 55,326
Feed & supplies	18,930	20,830	20,845	20,967
Machinery & equipment	42,498	49,311	50,071	55,162
Land & buildings	127,823	138,908	140,522	149,696
TOTAL INVESTMENT	$238,073	$261,320*	$263,806*	$281,151
EXPENSES				
Labor				
Hired	$ 7,085		$ 7,830	
Feed				
Dairy concentrate	24,520		26,971	
Hay and other	998		1,196	
Machinery				
Machine hire	793		740	
Machinery repair	4,475		4,733	
Auto expense	351		333	
Gas and oil	2,811		2,967	
Livestock				
Purchased animals	2,729		2,406	
Breeding fees	1,111		1,177	
Veterinary, medicine	1,443		1,616	
Milk marketing	1,770		2,471	
Other livestock expense	3,074		3,146	
Crops				
Fertilizer and lime	4,600		4,767	
Seeds and plants	1,434		1,510	
Spray and other	1,305		1,242	
Real Estate				
Land, building, fence repair	1,715		1,575	
Taxes	2,212		2,582	
Insurance	1,503		1,691	
Rent	1,204		1,239	
Other				
Telephone (farm share)	349		381	
Electricity (farm share)	1,435		1,664	
Interest paid	6,309		6,823	
Miscellaneous	1,085		1,092	
TOTAL CASH EXPENSES	$ 74,311		$ 80,152	
Machinery depreciation	$ 5,142		$ 5,757	
Building depreciation	2,739		2,739	
Unpaid labor	1,050		1,050	
Interest on farm equity @7%	12,553		13,296	
Decrease in livestock	---		---	
TOTAL FARM EXPENSES	$ 95,795		$102,994	

* Operators often make adjustments in values "between" years.

Table 52. contd. COMPARISON OF FARM BUSINESS SUMMARIES FOR 1976 AND 1977
Same 408 New York Dairy Farms

	Averages 1976	Averages 1977
RECEIPTS		
Milk sales	$ 91,470	$ 94,093
Crop sales	796	707
Dairy cattle sold	5,486	6,033
Livestock sales	1,205	1,394
Gas tax refund	125	143
Government payments	312	381
Work off farm	72	84
Custom machine work	130	123
Miscellaneous	895	1,082
TOTAL CASH RECEIPTS	$100,491	$104,040
Increase in livestock	3,449	2,958
Increase in feed & supplies	1,900	122
TOTAL FARM RECEIPTS	$105,840	$107,120
FINANCIAL SUMMARY		
Total Cash Receipts	$100,491	$104,040
Total Cash Expenses	74,311	80,152
NET FARM CASH FLOW	$ 26,180	$ 23,888
Total Farm Receipts	$105,840	$107,120
Total Farm Expenses	95,795	102,994
LABOR & MGT. INCOME/FARM	$ 10,045	$ 4,126
Number of operators	(497)1.23	(504)1.24
LABOR & MGT. INCOME/OPERATOR	$ 8,167	$ 3,327
BUSINESS FACTORS		
Man equivalent	2.4	2.5
Number of cows	68	71
Number of heifers	51	52
Acres of hay crops	114	117
Acres of corn silage	61	58
Total acres of crops	205	214
Lbs. of milk sold	926,800	962,900
Lbs. of milk sold/cow	13,600	13,600
Tons hay crops/acre	2.8	2.4
Tons corn silage/acre	13.2	14.1
Cows per man	28	28
Lbs. of milk sold/man	383,000	385,160
% Feed is of milk sales	27%	29%
Feed and crop exp./cwt. milk	$3.44	$3.58
Fertilizer & lime/crop acre	$22	$22
Machinery cost/cow	$247	$257
Av. price/cwt. milk	$9.87	$9.77

Table 53. SELECTED FARM BUSINESS SUMMARY FACTORS
New York Dairy Farms, Selected Years 1957-1977

Item	Year			
	1957	1967	1972	1977
Number of farms	464	548	571	570
Financial Summary				
Average capital invested	$42,012	$88,050	$173,780	$275,000
Total farm receipts	$20,166	$44,309	$68,376	$107,395
Total farm expenses	$13,798	$31,545	$49,636	$103,657*
Labor income per operator	$3,764	$7,511	$5,835	$3,049
Size of Business				
Number of cows	33	51	70	71
Pounds of milk sold	293,200	616,600	887,500	964,800
Crop acres	100	138	188	219
Man equivalent	1.8	1.9	2.3	2.5
Total work units	576	594	754	785
Rates of Production				
Milk sold per cow	8,890	12,100	12,700	13,600
Tons hay crops per acre	2.1	2.6	2.4	2.3
Tons corn silage per acre	11	17	11	14
Labor Efficiency				
Cows per man	18	27	30	28
Pounds milk sold per man	162,900	324,500	385,900	385,900
Work units per man	320	313	328	314
Cost Control Factors				
Machinery cost per cow	$105	$137	$177	$257
Machinery cost/cwt. milk	$1.19	$1.13	$1.40	$1.89
Feed bought per cow	$107	$165	$206	$377
Feed bought/cwt. milk	$1.31	$1.37	$1.62	$2.77
Feed & crop expense/cwt. milk	$1.71	$1.74	$2.06	$3.56
% Feed is of milk receipts	26%	26%	25%	28%
Capital Efficiency				
Total investment per man	$24,136	$48,300	$75,560	$113,680
Total investment per cow	$1,316	$1,800	$2,480	$4,000
Machinery investment/cow	$278	$397	$489	$778
Total investment/cwt. milk	$15	$15	$20	$29
Other				
Price per cwt. milk sold	$4.65	$5.25	$6.41	$9.76
Acres hay crops	58	76	156	119
Acres corn silage	12	24	57	59
Total acres in crops/cow	3.0	2.7	2.7	3.1
Fertilizer & lime exp./crop acre	$6	$12	$13	$22
Farm income per cow	$193	$250	$268	$332
Labor income per cow	$129	$147	$99	$53

* Includes interest paid, interest on equity capital, and building depreciation which were not included in total farm expenses prior to 1973. In earlier years, interest was charged on all capital and deducted from the net farm income and depreciation was included with inventory changes.

FARM BUSINESS SUMMARY
28 New York Dairy-Cash Crop Farms,* 1977

CAPITAL INVESTMENT

	1/1/77	1/1/78
Livestock	$ 59,580	$ 63,473
Feed & supplies	36,181	35,597
Machinery & equipt.	65,067	69,262
Land & buildings	199,899	209,299
TOTAL INVESTMENT	$360,727	$377,631

EXPENSES

Labor	
Hired	$ 14,584
Feed	
Dairy concentrate	23,716
Hay and other	939
Machinery	
Machine hire	1,753
Machinery repair	9,334
Auto expense	354
Gas and oil	5,639
Livestock	
Purchased animals	5,975
Breeding fees	1,026
Veterinary, medicine	1,930
Milk marketing	2,328
Other livestock expense	4,343
Crops	
Fertilizer and lime	9,134
Seeds and plants	2,897
Spray and other	2,477
Real Estate	
Land, building, fence repair	1,924
Taxes	3,474
Insurance	1,795
Rent	3,477
Other Cash Expense	
Telephone (farm share)	467
Electricity (farm share)	2,250
Interest paid	11,921
Miscellaneous	2,036
TOTAL CASH EXPENSES	$113,773
Machinery depreciation	6,842
Building depreciation	2,988
Unpaid labor	800
Interest on farm equity @ 7%	16,535
Decrease in feed & supplies	584
TOTAL FARM EXPENSES	$141,522

RECEIPTS

Milk sales	$103,700
Crop sales	21,840
Dairy cattle sold	7,655
Other livestock sales	1,818
Gas tax refund	281
Government payments	613
Work off farm	99
Custom machine work	1,953
Miscellaneous	2,738
TOTAL CASH RECEIPTS	$140,697
Increase in livestock	3,893
TOTAL FARM RECEIPTS	$144,590

FINANCIAL SUMMARY

Total Cash Receipts	$140,697
Total Cash Expenses	113,773
NET FARM CASH FLOW	$ 26,924
Total Farm Receipts	$144,590
Total Farm Expenses	141,522
LABOR & MGT. INCOME/FARM	$ 3,068
Number of operators (37)	1.32
LABOR & MGT. INCOME/OPERATOR	$ 2,322

BUSINESS FACTORS

Man equivalent	3.1
Number of cows	83
Number of heifers	52
Acres of hay crops	126
Acres of corn silage	64
Total acres of crops	373
Acres cropland rented	(143)
Lbs. of milk sold	1,076,500
Lbs. milk sold/cow	12,970
Tons hay crops/acre	2.7
Tons corn silage/acre	13.6
Cows per man	27
Lbs. of milk sold/man	349,500
% Feed is of milk receipts	23%
Feed & crop exp./cwt. milk	$3.55
Fertilizer & lime/crop acre	$24
Machinery cost/cow	$345
Av. price/cwt. milk	$9.63

* Farms where crop sales amounted to 10 percent or more of milk sales.

FARM BUSINESS SUMMARY
51 New York Dairy-Renter Farms,* 1977

CAPITAL INVESTMENT	1/1/77	1/1/78
Livestock	$ 49,677	$ 52,574
Feed & supplies	16,795	17,875
Machinery & equipt.	41,784	45,202
Land & buildings	11,958	14,578
TOTAL INVESTMENT	$120,214	$130,229

EXPENSES	
Labor	
Hired	$ 5,521
Feed	
Dairy concentrate	22,971
Hay and other	491
Machinery	
Machine hire	574
Machinery repair	4,182
Auto expense	249
Gas and oil	2,755
Livestock	
Purchased animals	2,450
Breeding fees	1,160
Veterinary, medicine	1,567
Milk marketing	2,618
Other livestock expense	3,236
Crops	
Fertilizer and lime	3,624
Seeds and plants	1,289
Spray and other	1,097
Real Estate	
Land, building, fence repair	911
Taxes	670
Insurance	930
Rent	7,793
Other Cash Expense	
Telephone (farm share)	448
Electricity (farm share)	1,515
Interest paid	3,823
Miscellaneous	774
TOTAL CASH EXPENSES	$70,648
Machinery depreciation	4,936
Building depreciation	169
Unpaid labor	700
Interest on farm equity @ 7%	6,006
TOTAL FARM EXPENSES	$82,459

RECEIPTS	
Milk sales	$85,514
Crop sales	843
Dairy cattle sold	4,980
Other livestock sales	1,185
Gas tax refund	90
Government payments	157
Work off farm	162
Custom machine work	32
Miscellaneous	620
TOTAL CASH RECEIPTS	$93,583
Increase in livestock	2,897
Increase in feed & supplies	1,080
TOTAL FARM RECEIPTS	$97,560

FINANCIAL SUMMARY	
Total Cash Receipts	$93,583
Total Cash Expenses	70,648
NET FARM CASH FLOW	$22,935
Total Farm Receipts	$97,560
Total Farm Expenses	82,459
LABOR & MGT. INCOME/FARM	$15,101
Number of operators (65)	1.27
LABOR & MGT. INCOME/OPERATOR	$11,853

BUSINESS FACTORS	
Man equivalent	2.2
Number of cows	63
Number of heifers	44
Acres of hay crops	116
Acres of corn silage	52
Total acres of crops	196
Lbs. of milk sold	866,000
Lbs. milk sold/cow	13,700
Tons hay crops/acre	2.2
Tons corn silage/acre	13.0
Cows per man	29
Lbs. of milk sold/man	399,100
% Feed is of milk sales	27%
Feed & crop exp./cwt. milk	$3.35
Fertilizer & lime/crop acre	$18
Machinery cost/cow	$250
Av. price/cwt. milk	$9.87

* A farm was classified as renter if no real estate was owned or if all cropland was rented.

FARM BUSINESS SUMMARY
Top 10 Percent of the Farms by Labor & Management Income
57 New York Dairy Farms, 1977

CAPITAL INVESTMENT	1/1/77	1/1/78
Livestock	$ 83,722	$ 91,256
Feed & supplies	33,240	39,227
Machinery & equipt.	67,878	80,174
Land & buildings	179,649	202,630
TOTAL INVESTMENT	$364,489	$413,287

EXPENSES	
Labor	
Hired	$ 16,210
Feed	
Dairy concentrate	41,828
Hay and other	1,735
Machinery	
Machine hire	973
Machinery repair	7,387
Auto expense	340
Gas and oil	4,304
Livestock	
Purchased animals	2,563
Breeding fees	1,855
Veterinary, medicine	2,769
Milk marketing	3,957
Other livestock expense	6,026
Crops	
Fertilizer and lime	7,453
Seeds and plants	2,256
Spray and other	1,840
Real Estate	
Land, building, fence repair	2,140
Taxes	4,231
Insurance	2,471
Rent	1,892
Other Cash Expense	
Telephone (farm share)	468
Electricity (farm share)	2,415
Interest paid	7,898
Miscellaneous	1,590
TOTAL CASH EXPENSES	$124,601
Machinery depreciation	7,510
Building depreciation	4,864
Unpaid labor	800
Interest on farm equity @ 7%	21,113
TOTAL FARM EXPENSES	$158,888

RECEIPTS	
Milk sales	$158,973
Crop sales	1,053
Dairy cattle sold	10,592
Other livestock sales	2,030
Gas tax refund	259
Government payments	736
Work off farm	81
Custom machine work	100
Miscellaneous	2,762
TOTAL CASH RECEIPTS	$176,586
Increase in livestock	7,534
Increase in feed & supplies	5,987
TOTAL FARM RECEIPTS	$190,107

FINANCIAL SUMMARY	
Total Cash Receipts	$176,586
Total Cash Expenses	124,601
NET FARM CASH FLOW	$ 51,985
Total Farm Receipts	$190,107
Total Farm Expenses	158,888
LABOR & MGT. INCOME/FARM	$ 31,219
Number of operators (71)	1.25
LABOR & MGT. INCOME/OPERATOR	$ 25,076

BUSINESS FACTORS	
Man equivalent	3.3
Number of cows	112
Number of heifers	84
Acres of hay crops	147
Acres of corn silage	90
Total acres of crops	306
Acres cropland rented	(78)
Lbs. of milk sold	1,612,600
Lbs. of milk sold/cow	14,400
Tons hay crops/acre	3.0
Tons corn silage/acre	15.5
Cows per man	34
Lbs. of milk sold/man	496,200
% Feed is of milk receipts	26%
Feed & crop exp./cwt. milk	$3.31
Fertilizer & lime/crop acre	$24
Machinery cost/cow	$229
Av. price/cwt. milk	$9.86

FARM BUSINESS SUMMARY
Average of 570 New York Dairy Farms, 1977

CAPITAL INVESTMENT

	1/1/77	1/1/78
Livestock	$ 53,164	$ 56,273
Feed & supplies	20,915	20,958
Machinery & equipt.	49,916	55,230
Land & buildings	141,797	151,749
TOTAL INVESTMENT	$265,792	$284,210

EXPENSES

Labor	
Hired	$ 8,066
Feed	
Dairy concentrate	26,741
Hay and other	1,181
Machinery	
Machine hire	750
Machinery repair	4,740
Auto expense	327
Gas and oil	2,987
Livestock	
Purchased animals	2,595
Breeding fees	1,193
Veterinary, medicine	1,684
Milk marketing	2,332
Other livestock expense	3,299
Crops	
Lime and fertilizer	4,766
Seeds and plants	1,524
Spray and other	1,282
Real Estate	
Land, building, fence repair	1,527
Taxes	2,577
Insurance	1,702
Rent	1,263
Other	
Telephone (farm share)	376
Electricity (farm share)	1,684
Interest paid	6,947
Miscellaneous	1,103
TOTAL CASH EXPENSES	$ 80,646
Machinery depreciation	5,783
Building depreciation	2,791
Unpaid labor	1,200
Interest on farm equity @ 7%	13,237
TOTAL FARM EXPENSES	$103,657

RECEIPTS

Milk sales	$ 94,165
Crop sales	801
Dairy cattle sold	6,000
Livestock sales	1,393
Gas tax refund	149
Government payments	393
Work off farm	82
Custom machine work	132
Miscellaneous	1,128
TOTAL CASH RECEIPTS	$104,243
Increase in livestock	3,109
Increase in feed & supplies	43
TOTAL FARM RECEIPTS	$107,395

FINANCIAL SUMMARY

Total Cash Receipts	$104,243
Total Cash Expenses	80,646
NET FARM CASH FLOW	$ 23,597
Total Farm Receipts	$107,395
Total Farm Expenses	103,657
LABOR & MGT. INCOME/FARM	$ 3,738
Number of operators (699)	1.23
LABOR & MGT. INCOME/OPERATOR	$ 3,049

BUSINESS FACTORS

Man equivalent	2.5
Number of cows	71
Number of heifers	51
Acres of hay crops	119
Acres of corn silage	59
Total acres of crops	219
Acres cropland rented	(56)
Lbs. of milk sold	964,800
Lbs. of milk sold/cow	13,600
Tons hay crops/acre	2.3
Tons corn silage/acre	14.1
Lbs. of milk sold/man	385,900
Cows per man	28
% Feed is of milk sales	28%
Feed & crop exp./cwt. milk	$3.56
Lime & fertilizer/crop acre	$22
Machinery cost/cow	$257
Av. price/cwt. milk	$9.76

FARM BUSINESS SUMMARY
Average Per Cow, 570 New York Dairy Farms, 1977

CAPITAL INVESTMENT

	1/1/77	1/1/78
Livestock	$ 749	$ 793
Feed & supplies	295	295
Machinery & equipt.	703	778
Land & buildings	1,997	2,137
TOTAL INVESTMENT	$3,744	$4,003

EXPENSES

Labor	
Hired	$ 113
Feed	
Dairy concentrate	377
Hay and other	17
Machinery	
Machine hire	11
Machinery repair	67
Auto expense	5
Gas and oil	42
Livestock	
Purchased animals	37
Breeding fees	17
Veterinary, medicine	24
Milk marketing	33
Other livestock expense	46
Crops	
Lime and fertilizer	67
Seeds and plants	21
Spray and other	18
Real Estate	
Land, building, fence repair	21
Taxes	36
Insurance	24
Rent	18
Other	
Telephone (farm share)	5
Electricity (farm share)	24
Interest paid	98
Miscellaneous	15
TOTAL CASH EXPENSES	$1,136
Machinery depreciation	81
Building depreciation	39
Unpaid labor	17
Interest on farm equity @ 7%	187
TOTAL FARM EXPENSES	$1,460

RECEIPTS

Milk sales	$1,326
Crop sales	11
Dairy cattle sold	84
Livestock sales	20
Gas tax refund	2
Government payments	6
Work off farm	1
Custom machine work	2
Miscellaneous	16
TOTAL CASH RECEIPTS	$1,468
Increase in livestock	44
Increase in feed & supplies	1
TOTAL FARM RECEIPTS	$1,513

FINANCIAL SUMMARY

Total Cash Receipts	$1,468
Total Cash Expenses	1,136
NET FARM CASH FLOW	$ 332
Total Farm Receipts	$1,513
Total Farm Expenses	1,460
LABOR & MGT. INCOME/FARM	$ 53
Number of operators (696)	1.23
LABOR & MGT. INCOME/OPERATOR	$43

BUSINESS FACTORS

Man equivalent	.035
Number of cows	(71)
Number of heifers	.72
Acres of hay crops	1.7
Acres of corn silage	.8
Total acres of crops	3.1
Lbs. of milk sold/cow	13,600
Tons hay crops/cow	3.9
Tons corn silage/cow	11.7
Lbs. of milk sold/man	385,900
% Feed is of milk sales	28%
Feed & crop exp./cow	$484
Lime & fertilizer/cow	$67
Machinery cost/cow	$257
Av. price/cwt. milk	$9.76
Debt per cow	$1,500
Debt payment/cow	$254